

Bibliography
for
Thermal Neutron Scattering
(Second Edition)

July 1969

日本原子力研究所

Japan Atomic Energy Research Institute

Bibliography for Thermal Neutron Scattering

Second Edition

Summary

The Neutron Thermalization Group of Japanese Nuclear Data Committee has published the first edition of "Bibliography for Thermal Neutron Scattering" (JAERI 4043, EANDC (J) 9 "AL"). This second edition contains the references included in the first edition and all additions collected by the group from October 1967 to March 1969. In the same manner as the first edition it contains references to the literature not only on measurements and calculations of thermal neutron scattering cross sections but also on the basic studies of lattice dynamics, and liquid and molecular dynamics in so far as it is concerned with the thermal neutron scattering. However, references on the magnetic scattering of thermal neutrons are excluded from this bibliography. The references contained in this bibliography are needed for the data evaluation which is one of the main activities of the Committee.

January, 1969

The Thermalization Group,*
Japanese Nuclear Data Committee

熱中性子散乱文献集(第2版)

要　　旨

シグマ研究委員会の熱化グループでは、すでに熱中性子の散乱断面積の測定および計算、あるいはそれに関連ある格子振動、液体および分子運動の基礎的研究についての文献をまとめ「熱中性子散乱文献集」第1版を出版している。この第2版では第1版に集録した文献のほかに、1967年10月から1968年12月までの間に新しく集められた文献をまとめて再整理したものである。

1969年1月

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Bibliography for Thermal Neutron Scattering

Second Edition

1. General Description

Collection of informations is made by the members, who are assigned to read specific literatures, filling up Data Sheets which contain the following items;

1. Authors
2. Réference
3. Title
4. Laboratory
5. Materials
6. Range of neutron energy and scattering angle
7. Temperature
8. Method
9. Results

This report consists of a list of Authors, Titles and References classified according to the species of materials, which are extracted from the above sheets. Reference sources include as many publications as available in the country and from abroad. They are journals, conference proceedings, report series and books in concern with the thermal neutron inelastic scattering.

This documentation activity will be continued for the future.

2. Remarks

1. References in this list are classified according to the species of materials. Thus when any one literature reports on a number of materials, it is listed for each material respectively. The international chemical symbols are adopted for indication of the materials, except some chemical compounds and general articles which are easily identified by the simple abbreviation of English names.
2. Classification number is indicated by five digit numbers. First two digits show the year and the last three digits indicate serial number for each material.
3. Names of authors are spelled in English.
4. Titles are also spelled in English. When a reference is written in other language, it is translated in English.
5. Réfence abbreviations follow Journal Abbreviations of Nuclear Science Abstracts. Books and conference proceedings are indicated by full titles, publisher and years, except the following proceedings ;
 - i) ISNSL Inelastic Scattering of Neutrons in Solids and Liquids, IAEA, Vienna
 - ii) ISN Inelastic Scattering of Neutrons, IAEA, Vienna
 - iii) PICG Proceeding of the International Conference on the Peaceful Uses of Atomic Energy, United Nations, Geneva

Editor M. SAKAMOTO

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1 General Articles

1.1. Review Articles

REVV-59001

B. BURAS, D. O'CONNOR

The Neutron-Phonon Interaction in Solids
Nukleonika, **4**, 119 (1959)

REVV-63002

B. N. BROCKHOUSE, J. BERGSMA, B. A. DASAMACHARYA
Liquid Dynamics from Neutron Spectrometry
ISNSL, Vol. **1**, 189 (1963)

REVV-63003

A. D. B. WOODS
Crystal Dynamics from Neutron Spectrometry
ISNSL, Vol. **2**, 3 (1963)

REVV-64004

B. N. BROCKHOUSE
Phonons and Neutron Scattering
Phonons and Phonon Interactions (ed. by A. BAK), 221,
(1964), W. A. Benjamin, Inc.

REVV-64005

B. N. BROCKHOUSE, S. HAUTECLER, H. STILLER
Inelastic Scattering of Slow Neutrons
The Interaction of Radiation with Solids (ed. by R.
STRUMANE *et al.*), 580 (1964), North-Holland Publishing
Co.

REVV-64006

B. R. A. NIJBOER, J. J. J. KOKKEDEE
The Scattering of Slow Neutron by Crystals and Liquids
AERE-Trans-1004 (1964)

REVV-65007

B. L. BROCKHOUSE, A. D. B. WOODS, G. DOLLING, I. M.
THORSON
Research with Inelastic Neutron Scattering at the NRU
Reactor
PICG, Vol. **7**, 419 (1965)

REVV-65008

V. F. TURCHIN
Slow Neutrons (Translated from Russian)
Israel Program for Scientific Translations, (1965)

REVV-65009

H. PALEVSKY
Slow Neutron Studies of Molecular Motions in Condensed Matter
BNL 9292 (1965) and *J. Chem. Phys.*, **63**, 157 (1966)

REVV-65010

K. E. LARSSON
Liquid Dynamics
JSN Vol. **2**, 3 (1965)

REVV-65011

Japanese Nuclear Data Committee
Survey and Problems in the Study of Thermal Neutron
Scattering
JAERI-Report 1086 (in Japanese) (1965)

REVV-65012

P. A. EGELSTAFF (ed.)
Thermal Neutron Scattering
Academic Press (1965)

REVV-67013

P. A. EGELSTAFF
Radiation Scattering Data on Liquid Metals
Adv. Phys., **16**, 147 (1967)

REVV-67014

H. PALEVSKY
Looking at Matter with Particles
BNL-50059 (T-462) (1967)

REVV-67015

J. R. BEYSTER, J. M. NEIL
Status of Thermal Neutron Spectra
GA-7092 (CONF-670707-7) (1967)

1.2. General Theories

GENRL-52001

G. PLACZEK
The Scattering of Neutrons by Systems of Heavy Nuclei
Phys. Rev., **86**, 377 (1952)

GENRL-54002

G. C. WICK
The Scattering of Neutrons by Systems Containing Light Nuclei
Phys. Rev., **94**, 1228 (1954)

GENRL-54003

L. VAN HOVE
Correlation in Space and Time and Born Approximation
Scattering in Systems of Interacting Particles
Phys. Rev., **95**, 249 (1954)

GENRL-55004

R. J. GLAUBER
Time-Dependent Displacement Correlation and Inelastic Scattering by Crystals
Phys. Rev., **98**, 1962 (1955)

GENRL-56005

A. C. ZEMACH, R. J. GLAUBER
Dynamics of Neutron Scattering by Molecules
Phys. Rev., **101**, 118 (1956)

GENRL-58006

L. VAN HOVE

A Remark on the Time-Dependent Pair Distribution
Physica, **24**, 404 (1958)

GENRL-60007

M. S. NELKIN

Effects of Chemical Binding on Nuclear Recoil

Phys. Rev., **119**, 1060 (1960)

GENRL-60008

P. SCHOFIELD

Space-Time Correlation Function Formalism for Slow
Neutron Scattering*Phys. Rev. Letters*, **4**, 239 (1960)

GENRL-61009

M. NELKIN

Slow-Neutron Inelastic Scattering and Neutron Thermaliza-
tionISNSL, **3** (1961)

GENRL-61010

P. SCHOFIELD

Some Properties of the Space-Time Correlation

ISNSL, **39** (1961)

GENRL-62011

S. N. PUROHIT, A. K. ROJAGOPAL

Scattering of Thermal Neutrons in Doppler Approxima-
tion*Nucl. Sci. and Eng.*, **13**, 250 (1962)

GENRL-62012

P. AAMODT, K. M. CASE, M. ROSENBAUM, P. F. ZWEIFEL

Quasi-Classical Treatment of Neutron Scattering

Phys. Rev., **126**, 1165 (1962)

GENRL-62013

R. J. GLAUBER

Scattering of Neutrons by Statistical Media

Lectures in Theoretical Physics, **4**, 571 (1962)

GENRL-62014

S. N. PUROHIT

Neutron Thermalization in a Crystalline Medium in
Incoherent Approximation

BNL-719 (C-32) Vol. 1, 203 (1962)

GENRL-62015

S. N. PUROHIT, A. K. ROJAGOPAL

Scattering of Thermal Neutrons in the Doppler Ap-
proximation

BNL-719 (C-32) Vol. 1, 238 (1962)

GENRL-62016

H. L. McMARRY

Calculation of Differential Scattering Cross Sections for
Slow Neutrons

BNL-719 (C-32) Vol. 1, 144 (1962)

GENRL-62017

M. ROSENBAUM, P. F. ZWEIFEL

Comparison of "Classical" and "Quasi-Classical" Cross
Sections for Some Simple Systems

BNL-719 (C-32) Vol. 1, 276 (1962)

GENRL-64018

A. SJÖLANDER

Lectures on Phonons and External Radiation

Phonons and Phonon Interactions (ed. by A. BAK) 76,
(1964), W. A. Benjamin, INC

GENRL-64019

A. FULINSKI

On the Statistical Mechanical Evaluation of the Slow
Neutron Scattering Function*Acta Physica Polonica*, **26**, 19 (1964)

GENRL-65020

A. FULINSKI

Statistical-Mechanical Theory of Incoherent Van Hove's
Scattering Function for Thermodynamic Systems*Acta Physica Polonica*, **27**, 245 (1965)

GENRL-65021

V. F. TURCHIN, V. A. TARASOV

Asymptotic Formulae for Slow Neutron Scattering by
Bound Atoms*Atomnaya Energiya* **18**, 118 (1965) and *J. Nuclear
Energy Pt. A/B*, **20**, 313 (1966)

GENRL-65022

L. V. MAIOROV

Asymptotic Form of the Scattering Law for Slow Neu-
trons*Atomnaya Energiya*, **19**, 67 (1965)

GENRL-65023

M. ROSENBAUM, P. F. ZWEIFEL

Quasiclassical Theory of Neutron Scattering

Phys. Rev., **137**, B 271 (1965)

GENRL-66024

S. K. SHINHA, G. VENKATARAMAN

Effect of Nuclear Spin Correlations on the Scattering of
Neutrons by Molecules*Phys. Rev.*, **149**, 1 (1966)

GENRL-66025

N. R. CANDELORE, R. C. CAST

A Method of Including Epithermal Neutron Scattering
by Bound Protons in Combined Slowing-Down/Thermal
Calculations by Monte Carlo

WAPD-TM-617 (1966)

GENRL-66026

G. K. IVANOV

Elastic and Quasielastic Scattering of Neutrons by Mol-
ecules*Soviet Phys., JETP* **23**, 481 (1966)

GENRL-66027

B. DORNER

Measurements of Dispersion Curves in Polycrystal and
Liquids at $\tau=0$

JUL-412-NP, (1966)

GENRL-66028

F. E. IVANOV

Elastic and Quasi-Elastic Scattering of Neutrons by

- Molecules
Soviet Phys., JETP, 23, 481 (1966)
- GENRL-67029
 N. A. LURIE
 Influence of Rotational Levels on Slow-Neutron Scattering by Linear Gases
J. Chem. Phys., 46, 352 (1967)
- GENRL-67030
 G. C. SUMMERFIELD, P. F. ZWEIFEL
 Application of the Quasiclassical Method to Incoherent Neutron Scattering by Molecules
Phys. Rev., 159, 1 (1967)
- GENRL-67031
 A. K. AGRAWAL, S. YIP
 Correlation of Infrared and Inelastic Neutron Scattering Spectra
J. Chem. Phys., 46, 1999 (1967)
- GENRL-67032
 V. G. BARYSHEVUSKII, V. L. LYUBOSHITS, M. I. PODGORETSKII
 Incoherent Scattering of Slow Neutrons in Polarized Target
BNL-TR-139 (1967)
- GENRL-68033
 R. I. SCHERMER, M. BULUME
 Polarization Effects in Slow Neutron Scattering-III.
 Nuclear Polarization
Phys. Rev., 166, 554 (1968)
- 1. 3. Neutron Scattering in Solids**
- SOLID-44001
 R. WEINSTOCK
 Inelastic Scattering of Slow Neutrons
Phys. Rev., 65, 1 (1944)
- SOLID-50002
 I. WALLER, P. O. FRÖMAN
 On Neutron Diffraction Phenomena According to the Kinematical Theory-I.
Arkiv. Fysik, 4, 183 (1950)
- SOLID-50003
 I. WALLER, P. O. FRÖMAN
 On Neutron Diffraction Phenomena According to the Kinematical Theory-II.
Arkiv. Fysik, 4, 191 (1950)
- SOLID-50004
 J. M. CASSELS
 The Scattering of Neutrons by Crystals
Progr. Nuclear Phys., 1, 185 (1950)
- SOLID-54005
 G. PLACZEK, L. VAN HOVE
 Crystal Dynamics and Inelastic Scattering of Neutrons
Phys. Rev., 93, 1207 (1954)
- SOLID-55006
 L. S. KOTHARI, K. S. SINGWI
 Thermal Inelastic Scattering of Cold Neutrons in Polycrystalline Solids
Proc. Roy. Soc., A 231, 293 (1955)
- SOLID-55007
 G. PLACZEK, L. VAN HOVE
 Interference Effects in the Total Neutron Scattering Cross Section of Crystals
Nuovo Cimento, 1, 233 (1955)
- SOLID-56008
 G. L. SQUIRES
 Relation between the Vibration Frequencies of a Crystal and the Scattering of Slow Neutrons
Phys. Rev., 103, 304 (1956)
- SOLID-57009
 A. SJÖLANDER
 On Two-Phonon in Neutron Diffraction Against Crystals
Arkiv. Fysik, 13, 215 (1957)
- SOLID-58010
 V. F. TURCHIN
 Many-Phonon Process in Crystals
Soviet Phys., JETP, 6, 96 (1958)
- SOLID-58011
 A. SJÖLANDER
 Multi-phonon Process in Slow Neutron Scattering by Crystals
Arkiv. Fysik, 14, 315 (1958)
- SOLID-59012
 L. S. KOTHARI, K. S. SINGWI
 Interaction of Thermal Neutrons with Solids
 Solid State Physics (ed. by F. Seitz and D. Turnbull), Vol 8, 109 (1959)
- SOLID-61013
 R. SCALETTAR
 The Effect of Crystal Anharmonicities on Neutron Scattering
ISNSL, 75 (1961)
- SOLID-61014
 W. MARSHALL, R. STUART
 The Scattering of Neutrons from Polycrystalline Materials
ISNSL, 75 (1961)
- SOLID-61015
 R. J. ELLIOTT, H. STERN
 Line Widths in Neutron-Phonon and Neutron-Magnon Scattering
ISNSL, 61 (1961)
- SOLID-61016
 G. BAYM
 Theomodynamic Green's Function Methods in Neutron Scattering by Crystals
ISNSL, 53 (1961)

- SOLID-63017**
B. V. THOMSON
 Neutron Scattering by Anharmonic Crystal
Phys. Rev., **131**, 1420 (1963)
- SOLID-63018**
G. C. SUMMERFIELD, P. F. ZWEIFEL
 Slow Neutron Scattering, 'Scattering Law' and $G(r, t)$
Phys. Rev., **131**, 1149 (1963)
- SOLID-63019**
K. S. SINGWI
 The Mössbauer Effect and Dynamics of Atomic Motions in Condensed Systems
ISNSL, Vol. 1, 3 (1963)
- SOLID-63020**
G. L. SQUIRES
 The Relation between the Interatomic Forces and the Frequencies of Symmetry Phonons in Cubic Crystals
ISNSL, Vol. 2, 71 (1963)
- SOLID-63021**
J. J. J. KOKKEDEE
 Theory of the Influence of Phonon-Phonon and Electron-Phonon Interactions on the Scattering of Neutrons by Crystals
ISNSL, Vol. 1, 15 (1963)
- SOLID-63022**
H. HAHN
 Perturbation Theory of Anharmonicity Effects in Slow Neutron Inelastic Scattering by Crystals
ISNSL, Vol. 1, 37 (1963)
- SOLID-63023**
T. H. K. BARRON, A. J. LEADBETTER, J. A. MORRISON, L. S. SALTER
 The Calculation of Debye-Waller Factors from Thermo-dynamic Data
ISNSL, Vol. 1, 49 (1963)
- SOLID-63024**
W. COCHRAN, R. A. COWLEY
 Dielectric Constants and Lattice Vibrations in Ionic Crystals
ISNSL, Vol. 1, 59 (1963)
- SOLID-63025**
D. G. MARTIN
 An Investigation into the Number of Neighbouring Atoms to be Included in Calculations of the Slow Neutron Scattering Cross Section of Defects in Solids
AERE-R-4527 (1964)
- SOLID-64026**
P. PERETTI, C. JOUANIN
 Scattering of Slow Neutrons by a Crystal with Point Defects
EUR-1020 (1964)
- SOLID-64027**
A. A. MARADUDIN, V. ANBEGAOKAR
 Calculation of the Scattering Function $S(k, \omega)$ for the
- Inelastic Scattering of Neutrons by Anharmonic Crystals
Phys. Rev., **135**, A 1071 (1964)
- SOLID-65028**
W. COCHRAN
 Theoretical Aspects of Phonon Dispersion Curves for Metals
ISN, Vol. 1, 3 (1965)
- SOLID-65029**
T. TOYA
 Electron-Phonon Interactions and Lattice Dynamics
ISN, Vol. 1, 25 (1965)
- SOLID-65030**
P. L. SRIVASTAVA
 A Comparison between the Electron-Phonon Interactions of Toya and Bailyn
ISN, Vol. 1, 49 (1965)
- SOLID-65031**
A. SJÖLANDER, R. JOHNSON
 Interpretation of Slow Neutron Scattering Data in Metal
ISN, Vol. 1, 61 (1965)
- SOLID-65032**
R. P. SINGH, K. K. MANI, V. M. KELKAR
 Phonon Dispersion Relations in Alkali Metals
ISN, Vol. 1, 77 (1965)
- SOLID-65033**
A. CZACHOR
 Lattice Dynamics of the Hexagonal Close-Packed Structure
ISN, Vol. 1, 181 (1965)
- SOLID-65034**
I. WAILER
 Theoretical Investigations of the Influence of Anharmonicity and Impurities on Neutron Scattering by Crystals and on the Mössbauer Effect
ISN, Vol. 1, 225 (1965)
- SOLID-65035**
R. J. ELLIOTT, A. A. MARADUDIN
 Theory of Neutron Scattering by Lattice Vibrations in Imperfect Crystals
ISN, Vol. 1, 231 (1965)
- SOLID-65036**
A. Z. AKCASU, P. K. OSBORN
 A Study of Inelastic Neutron Scattering by Anharmonic Crystals with the Damping Theory
ISN, Vol. 1, 261 (1965)
- SOLID-65037**
S. K. JOSHI, K. C. SHARMA
 The Nature of the Phonon Spectrum and the Analysis of Lattice Thermal Conductivity
ISN, Vol. 1, 285 (1965)
- SOLID-65038**
R. A. COWLEY
 Anharmonic Effects and the Scattering of Neutrons from

- a Crystal
ISN, Vol. 1, 297 (1965)
- SOLID-65039
R. SRINIVASAN, R. RAMJI RAO
Strain Dependence of the Frequencies and Thermal Expansion of the Hexagonal Close-Packed Lattice
ISN, Vol. 1, 325 (1965)
- SOLID-65040
J. KAGAN, A. P. ZERNOV
Effect of Anharmonicity on the Phonon Spectrum Near its Discontinuity
ISN, Vol. 1, 391 (1965)
- SOLID-65041
W. COCHRAN
Interpretation of Phonon Dispersion Curves
"Lattice Dynamics" (ed. by R. F. WALLIS) 75 (1965),
Pergamon Press
- SOLID-65042
W. A. HARRISON
Theory of Phonon Dispersion in Metal
"Lattice Dynamics" (ed. by R. F. WALLIS) 85 (1965),
Pergamon Press
- SOLID-65043
G. CHAMPIER, G. TOUSSAINT
Dynamics of Hexagonal Close Packed Lattice; Spectra of Vibrational Frequencies
"Lattice Dynamics" (ed. by R. F. WALLIS) 119 (1965),
Pergamon Press
- SOLID-65044
B. G. DICK
Shell and Exchange Charge Models of Interatomic Interactions in Solids
"Lattice Dynamics" (ed. by R. F. WALLIS) 159 (1965),
Pergamon Press
- SOLID-65045
M. LAX
Comments on the Shell Model for Lattice Vibrations
"Lattice Dynamics" (ed. by R. F. WALLIS) 179 (1965),
Pergamon Press
- SOLID-65046
H. B. ROSENSTOCK
Application of a Sum Rule to the Study of Interatomic Forces
"Lattice Dynamics" (ed. by R. F. WALLIS) 205 (1965),
Pergamon Press
- SOLID-65047
E. R. COWLEY, R. A. COWLEY
Anharmonic Interactions in Alkali Halides-I
Proc. Roy. Soc. (London) **A 287**, 1409. (1965)
- SOLID-65048
A. A. MARADUDIN
A Simple Expression for the Quartic Anharmonic Contribution to the Helmholtz Free Energy of a Special Model of an F. C. C. Crystal
- AEC-Report, LA-3379-MS (1965)
- SOLID-65049
K. N. PATHAK
Theory of Anharmonic Crystals
Phys. Rev., **139**, A 1569 (1965)
- SOLID-66050
A. CZACHOR
Lattice Vibrations in Metals of a Non-Bravais Structure
INR-709-II (1966)
- SOLID-66051
A. YA. BLANK, E. A. KANER
The Phonon Spectrum of Metals in Magnetic Field
Soviet Phys., JETP, **23**, 673 (1966)
- SOLID-66052
M. YA. MINTS
Energy Spectrum of a Disordered Linear Chain
Soviet Phys., JETP, **23**, 769 (1966)
- SOLID-66053
DANIEL N. PAYTON, WILLIAM M. VISSCHER
Dynamics of Disordered Harmonic Lattices in One, Two and Three Dimensions
LA-3471 (1966)
- SOLID-66054
G. GILAT, L. J. RAUBENHEIMER
Accurate Numerical Method for Calculating Frequency Distributions in Solids
Phys. Rev., **144**, 390 (1966)
- SOLID-66055
M. A. NUSIMOVICI, J. L. BIRMAN
Sum Rule for Lattice Vibration of Wurtzite Structures
J. Phys. Chem. Solids, **27**, 701 (1966)
- SOLID-66056
G. D. MAHAN
Phonon-Broadened Optical Spectra: Urbach's Rule
Phys. Rev., **145**, 602 (1966)
- SOLID-66057
J. C. SLATER
Green's-Function Method in the Energy-Band Problem
Phys. Rev., **145**, 599 (1966)
- SOLID-66058
DANIEL N. PAYTON
Dynamics of Disordered Harmonic Lattices
LA-3510 (1966)
- SOLID-66059
J. DELTOUR
A New Method of Obtaining the Frequency Spectrum Moments of Disordered Lattices by a Monte Carlo Process
Physica, **32**, 762 (1966)
- SOLID-66060
E. I. RASHBA
Theory of Vibronic Spectra of Molecular Crystals

- Soviet. Phys., JETP, 23, 708 (1966)*
- SOLID-66061
M. A. KRIVOGLAZ, E. A. TIKHONOVA
The Effect of Geometrical Distortions of the Crystal Lattice on X-Ray and Thermal Neutron Scattering by Multiconstituent Unordered Solid Solutions
BNL-Tr-104 (1966)
- SOLID-67062
S. L. GINZBURG, S. V. MALEEV
Slow Neutron Scattering in a Superconductor
Soviet. Phys., Solid State, 8, 1858 (1967)
- SOLID-67063
R. J. ELLIOT, D. W. TAYLOR
Vibrations of Random Dilute Alloys
Proc. Royal Soc., 296, 161 (1967)
- SOLID-67064
M. M. BREDOV, B. A. KOTOV, N. M. OKUNEVA, V. S. OSKOTSKII, A. L. SHAKH-BUDAGOV
Possibility of Measuring the Thermal Vibration Spectrum $g(\omega)$, using Coherent Inelastic Neutron Scattering from a Polycrystalline Sample
Soviet Phys., Solid State, 9, 214 (1967)
- SOLID-67065
R. O. POHL, J. A. KRUMHANSL, A. J. SIEVERS, A. TAYLOR
Experimental Phonon Physics
NYO-2397-41 (1967)
- SOLID-67066
W. C. OVERTON Jr., A. F. SCHUCH
Supplement to Tables for the Rapid Evaluation of the Debye Temperature of Cubic Crystals from Elastic Constants
LA-3615-MS (1967)
- SOLID-67067
J. L. DEPLANTE
Pair Interactions and Phonon Spectrum in Metal
J. Phys. Radium, 28, 465 (1967)
- SOLID-67068
K. N. PATHAK, B. DEO
Effect of Lattice Anharmonicity on the Debye-Waller Factor
Physica, 35, 167 (1967)
- SOLID-67069
LAKATOS, KATJA
Effects of Impurities on Lattice Vibrations. A Model Calculation Including Mass and Force Constant Changes
Neutron Scattering
NYO-2391-45 (1967)
- SOLID-67070
R. L. MARSTON, B. G. DICK
Lattice Dynamics of the Exchange Charge Model of Alkali Halides
Solid State Commun., 5, 731 (1967)
- SOLID-67071
A. S. BARKER Jr., H. W. VERLESER
Long Wave Optical Phonon Vibrations in Mixed Cry-

- stals
Solids State Commun 5, 695 (1967)
- SOLID-67072
P. S. YUEN, Y. P. VARHNI
Angular Forces in the Lattice Dynamics of Face-Centered Cubic Metals
Phys. Rev., 164, 895 (1967)
- SOLID-67073
K. KREBS, K. HÖLZL
Inelastic Neutron Scattering and Lattice Dynamics of Metals in Quasi-Ion Approximation
EUR 3621 e Part. 1 (1967)
- SOLID-67074
E. G. BHOVMAN, Y. KAGAN
The Phonon Spectrum of Metals (I)
Soviet Phys., JETP, 25, 365 (1967)
- SOLID-67075
MAX WAGNAR
Dispersion Dynamics of Crystal Lattices
Z. Physik, 206, 131 (1967)
- SOLID-67076
R. ENGLMAN, R. RUPPIN
Optical Lattice Vibrations in Finite Ionic Crystals I. In the Absence of Retardation
IA-1117 (1967)
- SOLID-67077
D. G. MARTIN
The Mathematical Formulation of the Scattering of Long Wavelength Neutrons by Defects in Solids
AERE-R-5479 (1967)
- SOLID-68078
P. D. MANNHEIM
Influence of Force-Constant Changes on the Lattice Dynamics of Cubic Crystals with Point Defects
Phys. Rev., 165, 1011 (1968)
- SOLID-68079
T. R. KOHLER
New Theory of Lattice Dynamics at 0°K
Phys. Rev., 165, 942 (1968)
- SOLID-68080
C. BUZANO, F. DEMICHELIS, M. RASETTI
Rotation-Vibration Interaction in Scattering of Slow-Neutrons by Spherical-Top Molecules
Phys. Rev., 167, 97 (1968)
- SOLID-68081
L. CHEVEAU
Model for Lattice Dynamics in Metals
Phys. Rev., 169, 496 (1968)
- SOLID-68082
S. K. SINHA
Electron-Phonon Interaction and Phonon Dispersion Relation Using the Augmented-Plane-Wave Method
Phys. Rev., 169, 477 (1968)

- SOLID-68083
P. S. HO
Lattice Dynamic Calculation for Alkali Metals
Phys. Rev., **169**, 523 (1968)
- SOLID-68084
W. H. HARTMANN
Theory of the Vibrations of Dilute Alloys with Short-Range Order
Phys. Rev., **172**, 677 (1968)
- SOLID-68085
D. G. MARTIN
The Calculation of Differential Neutron Scattering Cross Sections of Point Defects in a Related Lattice
AERE-R-5682 (1968)
- SOLID-68086
M. WAGNER
Investigation of Lattice Dynamics by Means of Vibronic Spectra
Z. Physik, **214**, 78 (1968)
- SOLID-68087
J. DELTOUR
The Computation of Lattice Frequency Distribution Functions by Means of Continued Fraction
Physica, **39**, 413 (1968)
- SOLID-68088
F. W. DE WETTE, A. RAHMAN
Inelastic Scattering of Neutrons by Polycrystals
Phys. Rev., **176**, 784 (1968)
- SOLID-68089
L. S. KOTHARI, C. M. SINGAL
Lattice Dynamics of Microcrystallites
Phys. Rev., **168**, 952 (1968)
- SOLID-68090
L. S. KOTHARI, I. C. GOYAL
Neutron Scattering from an n-Dimensional Lattice ($n=1, 2, 3$)
Phys. Rev., **168**, 752 (1968)
- 1.4. Neutron Scattering in Liquids**
- LIQUID-40001
BYRON T. DARLING, DAVID M. DENNISON
The Water Vapor Molecule
Phys. Rev., **57**, 128 (1940)
- LIQUID-41002
R. G. SACHS, E. TELLER
The Scattering of Slow Neutrons by Molecular Gases
Phys. Rev., **60**, 18 (1941)
- LIQUID-52003
G. PLACZEK
The Scattering of Neutrons by Systems of Heavy Nuclei
Phys. Rev., **86**, 377 (1952)
- LIQUID-54004
LEON VAN HOVE
- Correlations in Space and Time and Born Approximation Scattering in Systems of Interacting Particles
Phys. Rev., **95**, 249 (1954)
- LIQUID-56005
A. C. ZEMACH, R. J. GLAUBER
Dynamics of Neutron Scattering by Molecules
Phys. Rev., **101**, 118 (1956)
- LIQUID-56006
T. J. KRIEGER, M. S. NELKIN
The Scattering of Slow Neutrons by Hydrogenous Moderators
TID-4500, 11th ed KAPL-1597 (1956)
- LIQUID-58007
GEOGE H. VINEYARD
Scattering of Slow Neutron by a Liquid
Phys. Rev., **110**, 999 (1958)
- LIQUID-59008
P. G. DE GENNES
Liquid Dynamics and Inelastic Scattering of Neutrons
Physica, **25**, 825 (1959)
- LIQUID-60009
C. T. CHUDLEY, R. J. ELLIOTT
Neutron Scattering from a Liquid on a Jump Diffusion Model
Proc. Phys. Soc., **2**, 353 (1960)
- LIQUID-60010
P. SCHOFIELD
Space-Time Correlation Function Formalism for Slow Neutron Scattering
Phys. Rev. Letters, **4**, 239 (1960)
- LIQUID-60011
MARK NELKIN
Scattering of Slow Neutrons by Water
Phys. Rev., **119**, 741 (1960)
- LIQUID-60012
K. S. SINGWI, A. SJÖLANDER
Diffusive Motions in Water and Cold Neutron Scattering
Phys. Rev., **119**, 863 (1960)
- LIQUID-61013
STUART A. RICE, ALAN R. ALLNATT
On the Kinetic Theory of Dense Fluids, VI. Singlet Distribution Function for Rigid Spheres with an Attractive Potential
J. Chem. Phys., **34**, 2144 (1961)
- LIQUID-61014
A. RAHMAN, K. S. SINGWI, A. SJÖLANDER
Dynamics of Atomic Motions in Liquids and Cold Neutron Scattering
Phys. Rev., **122**, 9 (1961)
- LIQUID-62015
GEORGE NEMETHY, HAROLD A. SCHRAGA
Structure of Water and Hydrophobic Bonding in Proteins. I. A Model for the Thermodynamic Properties of Liquid

- Water
J. Chem. Phys., **36**, 3382 (1962)
- LIQUID-62016
 A. RAHMAN, K. S. SINGWI, A. SJÖLANDER
 Theory of Slow Neutron Scattering by Liquids-I
Phys. Rev., **126**, 986 (1962)
- LIQUID-62017
 P. A. EGELSTAFF
 Neutron Scattering Studies of Liquid Diffusion
Adv. Phys., **11**, 203 (1962)
- LIQUID-62018
 A. RAHMAN, K. S. SINGWI, A. SJÖLANDER
 Stochastic Model of a Liquid and Cold Neutron Scattering-II
Phys. Rev., **126**, 997 (1962)
- LIQUID-62019
 S. YIP, R. K. OSBORN
 "Hindered Rotation" in Liquids and Slow-Neutron Scattering
 BNL-719 (C-32), Vol. 1, 289 (1962)
- LIQUID-63020
 P. A. EGELSTAFF
 Interpretation of Coherent Neutron Scattering by Liquids
 ISNSL. Vol. 1, 203 (1963)
- LIQUID-63021
 K. S. SINGWI, A. SJÖLANDER, A. RAHMAN
 Frequency Spectrum of Liquids and Cold Neutron Scattering
 ISNSL, Vol. 1, 215 (1963)
- LIQUID-63022
 SIDNEY YIP, R. K. OSBORN
 Slow Neutron Scattering by Hindered Rotators
Phys. Rev., **130**, 1860 (1963)
- LIQUID-63023
 V. S. OSALSKII
 Theory of the Quasi-Elastic Scattering of Cold Neutrons in Liquids
Soviet Phys. Solid State, **5**, 789 (1963)
- LIQUID-63024
 D. BUTLER
 The Scattering of Slow Neutron by Heavy Water-I.
 Intermolecular Scattering
Proc. Phys. Soc., **81**, 276 (1963)
- LIQUID-63025
 D. BUTLER
 The Scattering of Slow Neutron by Heavy Water-II.
 Intermolecular Scattering
Proc. Phys. Soc., **81**, 294 (1963)
- LIQUID-63026
 SIDNEY YIP, R. K. OSBORN
 Small Energy Rotational Transitions in Slow-Neutron Scattering by Water
Phys. Rev., **131**, 2547 (1963)
- LIQUID-63027
 L. KADANOFF, P. C. MARTIN
 Hydrodynamic Equations and Correlation Functions
Ann. Phys. (N. Y.), **24**, 419 (1963)
- LIQUID-63028
 A. RAHMAN
 Intermediate Scattering Function in Slow Neutron Scattering
Phys. Rev., **130**, 1334 (1963)
- LIQUID-64029
 JAMES A. YOUNG, JUAN U. KOPPEL
 Slow Neutron Scattering by Molecular Hydrogen and Deuterium
Phys. Rev., **135**, A 603 (1964)
- LIQUID-64030
 SIDNEY YIP, MARK NEKLIN
 Application of Kinetic Model to Time-Dependent Density Correlations in Fluids
Phys. Rev., **135**, A 1241 (1964)
- LIQUID-64031
 JUAN U. KOPPEL, JAMES A. YOUNG
 Neutron Scattering by Water Taking into Account the Anisotropy of the Molecular Vibrations
Nucl. Sci. and Eng., **19**, 412 (1964)
- LIQUID-64032
 A. RAHMAN
 Correlations in Motion of Atoms in Liquid Argon
Phys. Rev., **136**, A 405 (1964)
- LIQUID-64033
 MARK NELKIN, AJOI GHATAK
 Simple Binary Collision Model for Van Hove's G(r, t)
Phys. Rev., **135**, A 4 (1964)
- LIQUID-64034
 P. A. EGELSTAFF
 The Thermal Motion of Simple Liquids
 AERE-R 4641 (1964)
- LIQUID-65035
 D. J. SIGMAR
 The Self-Correlation Function of Real Gases
 ISN, Vol. 2, 59 (1965)
- LIQUID-65036
 K. S. SINGWI, G. FELDMANN
 Coherent Scattering of Slow Neutrons by Liquid Sodium
 ISN, Vol. 2, 85 (1965)
- LIQUID-65037
 M. NELKIN, J. M. J. VAN LEEUWEN, S. YIP
 A Kinetic Description of the Van Hove Correlation Functions
 ISN, Vol. 2, 35 (1965)
- LIQUID-65038
 V. F. SEARS
 The Itinerant Oscillator Model of Liquids
Proc. Phys. Soc., **86**, 953 (1965)

LIQUID-65039

SIDNEY YIP, S. RANGANATHAN
 Dynamic Structure Factor of Dilute Gases in the Fokker-
 Planck Approximation
Phys. Fluids, **8**, 1956 (1965)

LIQUID-65040

ALAN G. GIBBS, JOEL H. FERZIGER
 Models for the Motion of Molecule in a Liquid and
 Their Application to Slow-Neutron Scattering
Phys. Rev., **138**, A 701 (1965)

LIQUID-65041

J. U. KOPPEL, JAMES A. YOUNG
 The Role of Interference Scattering in Neutron Ther-
 malization by Heavy Water
Nukleonik, **7**, 408 (1965)

LIQUID-65042

JEROME WEINSTOCK
 Nonanalyticity of Transport Coefficients and the Complete
 Density Expansion of Momentum Correlation Functions
Phys. Rev., **140**, A 460 (1965)

LIQUID-66043

V. F. SEARS
 Theory of Cold Neutron Scattering by Homonuclear
 Diatomic Liquids
Can. J. Phys., **44**, 1279 (1966)

LIQUID-66044

V. F. SEARS
 Theory of Cold Neutron Scattering by Homonuclear
 Diatomic Liquids. II Hindered Rotation
Can. J. Phys., **44**, 1299 (1966)

LIQUID-66045

V. F. SEARS
 The Law of Corresponding States and Cold Neutron
 Scattering by Liquid
Can. J. Phys., **44**, 867 (1966)

LIQUID-66046

ROBERT ZWANZIG
 Approximate Eigenfunctions of the Liouville Operator
 in Classical Many-Body Systems
Phys. Rev., **144**, 170 (1966)

LIQUID-66047

KARL-ERIK LARON, LEIF BERGSTEDT
 Proton Motions in Complex Hydrogenous Liquid I. A
 Cross Section for Quasi-Elastic Scattering of Slow Neu-
 trons
Phys. Rev., **151**, 117 (1966)

LIQUID-66048

Y. NAKAHARA, H. TAKAHASHI
 On the Itinerant Oscillator Model of Liquids
Proc. Phys. Soc., **89**, 747 (1966)

LIQUID-66049

H. L. McMURRY, G. J. RUSSELL, R. L. BRUGGER
 Slow-Neutron Scattering by Water
Nucl. Sci. and Eng., **25**, 248 (1966)

LIQUID-66050

BRUCE J. BERNE, NEAN PIERRE BOON, STUART A. RICE
 On the Calculation of Autocorrelation Functions of
 Dynamical Variables
Chem. Phys., **45**, 1086 (1966)

LIQUID-66051

ANEESUR RAHMAN
 Liquid Structure and Self-Diffusion
J. Chem. Phys., **45**, 2585 (1966)

LIQUID-66052

P. KURI, P. SAUER
 Note on Calculating Energy Values of Rotationally
 Hindered Linear Molecules
Z. Physik, **194**, 478 (1966)

LIQUID-66053

P. SAUER
 On Hindered Rotation of Linear Molecules
Z. Physik, **194**, 360 (1966)

LIQUID-66054

R. C. DESAI
 Atomic Motions in Monoatomic Fluids
NYO 3326-13 (1966)

LIQUID-66055

R. C. DESAI, M. NELKIN
 Atomic Motions in a Rigid Sphere Gas as a Problem in
 Neutron Transport
Nucl. Sci. and Eng., **24**, 142 (1966)

LIQUID-66056

V. ARDENTE, G. F. NARDELLI, L. REATTO
 Slow-Neutron Scattering by Liquids, a Hindered-Trans-
 lator Model
Phys. Rev., **148**, 124 (1966)

LIQUID-66057

RALPH NOSSAL
 Validity of the Convolution Approximation for the Van
 Hove $G(r, t)$ Function
Phys. Rev., **143**, 74 (1966)

LIQUID-66058

YASUAKI NAKAHARA, HIROSHI TAKAHASHI
 On the Itinerant Oscillator Model of Liquids
 JAERI-Memo 2311 (1966)

LIQUID-66059

A. L. ÉFROS
 Theory of Thermal Diffusion of Brownian Particles
Soviet Phys., JETP, **23**, 536 (1966)

LIQUID-66060

S. N. PUROHIT
 Analysis of the Quasi-Elastic Scattering of Neutrons in
 Hydrogenous Liquids
AE-259 (1966)

LIQUID-66061

A. ARDENTE, G. F. NARDELLI, L. REATTO
 Incoherent Scattering of Slow Neutrons by Liquid: A
 Hindered-Translator Model
 Reactor Physics in the Resonance and Thermal Regions,

- Vol. 1, 73 (1966),
M. I. T. Press
- LIQUID-67062
J. L. LEBOWITZ, J. K. PERCUS
Kinetic Equations and Density Expansions; Exactly Solvable One-Dimensional System
Phys. Rev., 155, 122 (1967)
- LIQUID-67063
P. A. EGELSTAFF
Radiation Scattering Data on Liquid Metals
Adv. Phys., 16, 147 (1967)
- LIQUID-67064
N. W. ASHCROFT, N. H. MARCH
Structure Factor and Direct Correlation Function for a Classical Hard Sphere Fluid
Proc. Roy. Soc. (London), 297, 336 (1967)
- LIQUID-67065
J. STECKI
Frequency-Dependent Direct Correlation Function
Discussions Faraday Soc., 43, 212 (1967)
- LIQUID-67066
B. K. ALDRIDGE, R. C. EDEN, J. W. WHITE
Neutron Scattering Spectroscopy of Liquids
Discussions Faraday Soc., 43, 169 (1967)
- LIQUID-68967
R. NOSSAL
Collective Motion in Simple Classical Fluid
Phys. Rev., 166, 81 (1968)
- LIQUID-68068
H. SHIMIZU
Dependence of the Time-Correlation Functions of Molecular Random Motions on the Intermolecular Potential
J. Chem. Phys., 48, 2494 (1968)
- LIQUID-68069
K. S. SINGWI, K. SKÖLD, M. P. TOSI
Zero Sound in Classical Liquids
Phys. Rev. Letters, 21, 881 (1968)
- ### 1.5. Scattering Law
- SCATR-60001
P. A. EGELSTAFF
The Measurement of the Scattering Law for Moderator
AERE-R-3593 (1960)
- SCATR-61002
P. A. EGELSTAFF
The Theory of the Thermal-Neutron Scattering Law
ISNSL, 25 (1961)
- SCATR-61003
P. A. EGELSTAFF
The Treatment of Thermal Neutron Scattering Law Data
AERE-R-3622 (1961)
- SCATR-61004
R. C. F. McLATCHIE, C. HEARD, P. A. EGELSTAFF, P.
- SCHOFIELD
Examples of the Thermal Neutron Scattering Law
AERE-R-3847 (1961)
- SCATR-62005
P. A. EGELSTAFF
The Scattering of Thermal Neutrons by Moderators
Nucl. Sci. and Eng., 12, 250 (1962)
- SCATR-62006
P. A. EGELSTAFF, P. SCHOFIELD
On the Evaluation of the Thermal Neutron Scattering Law
Nucl. Sci. and Eng., 12, 260 (1962)
- SCATR-63007
P. A. EGELSTAFF
Practical Analysis of Neutron Scattering Data into Self and Interference Terms
ISNSL, Vol. 1, 65 (1963)
- SCATR-67008
J. P. PLUMMER
Multiple Scattering of Thermal Neutrons
IN-1045 (1967)
- SCATR-68009
S. PAHOR
Multiple Scattering and Inverse Albedo Problem
Phys. Rev., 175, 218 (1968)
- ### 1.6. Computer Code
- CODE-61001
J. BELL
SUMMIT, An IBM-7090 Program for the Computation of Crystalline Scattering Kernels
GA-2492 (1961)
- CODE-61002
H. C. HONECK
GAKER
BNL-5826 (1961)
- CODE-62003
R. C. F. MACLATCHIE
LEAP, An IBM 7090 FORTRAN II Code for the Evaluation of the Thermal Neutron Scattering Law
Harwell Internal Report (1962)
- CODE-63004
J. D. MACDOUGALL
PIXSE
AEEW-M 318 (1963)
- CODE-63005
C. W. LINDENMEIER, D. D. MATSUMOTO, D. R. SKEEN
Program KERNEL
HW-78288 (1963)
- CODE-64006
H. C. HONECK, D. H. HOUSTON, Y. D. NALIBOFF
MUSE, A Computer Code for Multiple Scattering Corrections
GA-5968 (1964)

CODE-64007

Y. D. NALIBOFF, J. U. KOPPEL
 HEXSCAT-Coherent Elestic Scattering of Neutrons by
 Hexagonal Lattice
 GA-6026 (1964)

CODE-65008

H. C. HONECK, Y. D. NALIBOFF
 FLANGE
 GA-6824 (1965)

CODE-65009

KEN MATSUOKA, K. ARAI
 Mannual of Egelstaff-Schofield Model Code (E. S. Code)
 JAERI-1094 (1965)

CODE-65010

S. IJIMA, M. TOKIZAWA
 UNCLE, An IBM-7090 Program for Calculating the
 Scattering Kernels for Anisotropic Crystal
 JAERI-1087 (in Japanese) (1965)

CODE-65011

S. SHIMADA
 NELKER, A Code of Scattering Kernel Calculation for
 Bound Hydrogen
 JAERI-1085 (in Japanese) (1965)

CODE-65012

Y. D. NALIBOFF
 LHK-An IBM 7044 Program to Calculate Cross Sections
 and Kernels for Liquid Para-and Ortho-Hydrogen
 GA-5652 (1965)

CODE-65013

L. G. GANNON, H. L. McMURRY
 A Machine Program for Calculating Slow Neutron
 Scattering Cross Section with Exact Averaging over
 Molecular Orientation
 IDO-17087 (1965)

CODE-66014

Japanese Nuclear Data Committee
 How to Use the Uncle Code
 Supplement to JAERI-1087, JAERI-Memo 2534 (1966)

CODE-66015

P. R. BEVINGTON, G. A. PETITT
 A Computer Code for Correcting Neutron Scattering
 Angular Distributions
Nuclear Instr. and Method, 44, 341 (1966)

CODE-66016

J. U. KOPPEL, J. R. TRIPPLETT, Y. D. NALIBOFF
 GASKET : A Unified Code for Thermal Neutron Scat-
 tering
 GA-7417 (1966)

CODE-66017

P. R. BEVINGTON, G. A. PETITT
 MANIAC : A Computer Code for Correcting Neutron
 Scattering Angular Distributions
Nuclear Instr. and Methods, 44, 341 (1966)

CODE-67018

J. U. KOPPEL, J. R. TRIPPLETT, Y. D. NALIBOFF
 GASKET : A Unified Code for Thermal Neutron Scat-
 tering
 GA-7417 (Rev.) (1967)

CODE-67019

J. D. VISSER, R. VAN DER WALT
 Vloed: A FORTRAN IV Data Reduction and Flux
 Calculation Program Written for Use on the IBM-360
 Digital Computer
 PEL-148 (1967)

CODE-67020

C. MOBLE, A. W. SOLBRIG, JR., H. L. McMURRY
 MACS M: A Progam for Computing the Crystal Dyna-
 mical Matrix, Phonon Dispersion Relations, and Structure
 Factores for Neutron Inelastic Scattering
 IN-1125 (1967)

CODE-67021

G. M. LITTON
 Program Bragg: A FORTRAN-IV Program for Cal-
 culation Bragg Curves and Flux Distributions
 UCRL-17391 (1967)

CODE-67022

P. HUTCHISON, P. SCHOFIELD
 SCAT and SLAB: Tow Computer Codes for the Com-
 putation Thermal Neutron Scattering Cross-Sections
 AERE-R-5536 (1967)

CODE-67023

J. R. BOYSTER, H. L. McMURRY
 ADJUSTER, A Force Constant Adjuster Program to
 Obtain Least Squares Fit to Observed Frequencies of
 Molecules and Crystals
 IN-1148 (1967)

CODE-67024

W. W. CLENDENIN
 Calculation of Thermal Neutron Scattering Cross Sections
 for Crystalline Materials; The TOR Program
 LA-3823 (1967)

CODE-67025

R. L. CURTIS, R. A. GRIMESEY
 INCIT-A FORTRAN-IV Program to Generate Thermal
 Neutron Spectra and Multigroup Constants Using
 Arbitrary Scattering Kernels
 IN-1062 (1967)

CODE-67026

Y. NAKAHARA, O. KATO
 FREDAM-B I, A FORTRAN-IV Program for Com-
 putation of the Frequency Distributions of Beryllium and
 Ice by Root Sampling Method
 JAERI-1146 (1967)

CODE-68027

J. K. BOYTER, A. W. SOLBRIG, Jr.
 MACS J. A Program for Computing Crystal Phonon
 Dispersion Relations, Structure Factors for Neutron
 Inelastic Scattering, and Jacobian Matrices

IN-1147 (1968)

1.7. Compilation

COMPL-62001

R. M. BRUGGER

Compilation of Reduced Slow Neutron Partial Differential
Scattering Cross Sections

BNL-719 (C-32), Vol. 1, 3(1962)

COMPL-62002

P. A. EGELSTAFF

Compilation of Early Scattering Law Data
AERE-3931 (1962)

COMPL-63003

K. PARKER

The Aldermaston Nuclear Data Library at May 1963
AWRE-O-70/63 (1963)

COMPL-64004

J. R. STEHN, M. D. GOLDBERG, B. A. MAGURNO, R. WIENER-
CHASMANNeutron Cross Sections Vol. 1 Z=1 to 20
BNL-325 (2nd ed. Suppl. 2) (1964)

COMPL-65005

A. B. SMITH

Reports to the AEC Nuclear Cross Sections Advisory
Group Meeting Held at National Bureau of Standards
Gaithersburg Laboratory and Atomic Energy Commission
March 8-9, 1965
WASH-1056 (1965)

COMPL-66006

M. D. GOLDBERG, S. F. MUGHABGHAB, S. N. PUROHIT, B. A.
MAGURNO, S. M. MAYNeutron Cross Sections Volume 2 B, Z=41 to 60
BNL-325 (2nd ed. Suppl. 2) (1966)

COMPL-66007

S. D. SPARCK

SILBIT: ANL Cross-Section Library Code
ANL-7112 (TID-4500) (1966)**1.8. Miscellaneous**

MISCL-66001

J. M. BEYSTER, J. M. NEIL

The Influence of Neutron Cross Sections on Thermal
Reactor Spectrum
CONF-660303 (Book 1), 91 (1966)

MISCL-66002

J. R. WORDEN, W. L. PURCELL, R. C. LIIKALA

Sensitivity of Thermal Reactor Parameters to Scattering
Model
CONF-660303 (Book 1), 146 (1966)

MISCL-66003

J. E. SUICH

The Sensitivity of D₂O Moderate Reactor Parameters to
Thermal Neutron Scattering Law
CONF-660303 (Book 1), 151 (1966)

MISCL-67004

G. D. WIGNALL

Multiple Elastic Scattering of Thermal Neutrons by
Polycrystalline Lead
AERE-M 1911 (1967)

MISCL-67005

M. J. COOPER, R. NATHANS

The Resolution Function in Neutron Diffractometry I.
The Resolution Function of a Neutron Diffractometer
and its Application to Phonon Measurements
Acta Cryst., **23**, 357 (1967)

MISCL-67006

EUGENE CANFIELD

On Models for Calculating Effects of Thermal Moderator
Motion
UCRL-50323 (1967)

MISCL-67007

B. D. SR. O'REILLY, R. C. LEWIS

Discrete Ordinates Representations of the Scattering
Kernel
NAA-SR-12493 (1967)

2 Inorganic Compounds

2.1. Light Water

H_2O -55001

B. JACROT, F. NETTER, M. GALULA

Time-of-Flight Spectrometry Equipment for Slow Neutrons in Use at the Saclay Reactor- Its Application to a Study of the Inelastic Scattering of Cold Neutrons
PICG, Vol. 5, 77 (1955)

H_2O -57002

T. J. KRIEGER, M. S. NELKIN

Slow-Neutron Scattering by Molecules
Phys. Rev., 106, 290 (1957)

H_2O -58003

A. W. McREYNOLDS, M. S. NELKIN, M. N. ROSENBLETH,
W. L. WHITTEMORE

Neutron Thermalization by Chemically-Bound Hydrogen
and Carbon
PICG, Vol. 16, 297 (1958)

H_2O -58004

B. N. BROCKHOUSE

Structural Dynamics of Water by Neutron Spectrometry
Nuovo Cimento, 9, 45 (1958)

H_2O -59005

B. N. BROCKHOUSE

Diffusive Motions in Liquids and Neutron Scattering
Phys. Rev. Letters, 2, 287 (1959)

H_2O -59006

D. J. HUGHES, H. PALEVSKY, W. KLEY, E. TUNKELO
Atomic Motions in Water by Scattering of Cold Neutrons
Phys. Rev. Letters, 3, 91 (1959)

H_2O -60007

D. J. HUGHES, H. PALEVSKY, E. TUNKELO

Atomic Motions in Water by Scattering of Cold Neutrons
Phys. Rev., 119, 872 (1960)

H_2O -60008

K. E. LARSSON, S. HOLMRYD, K. OTNES

An Experimental Study of the Scattering of Slow Neutrons from H_2O and D_2O
AE-47 (1960)

H_2O -60009

D. CRIBIER, B. JACROT

Quasi-Elastic Scattering of Cold Neutrons by Water and
Self-Scattering Coefficient of the Liquid
J. Phys. Radium, 21, 69 (1960)

H_2O -60010

MARK NELKIN

Scattering of Slow Neutrons by Water
Phys. Rev., 119, 741 (1960)

H_2O -61011

A. D. B. WOODS, B. N. BROCKHOUSE, M. SAKAMOTO, R. N.
SINCLAIR

Energy Distributions of Neutrons Scattered from Graphite,
Light and Heavy Water, Ice Zirconium Hydride, LiH-
rium Hydride, Sodium Hydride and Ammonium Chloride
by the Beryllium Detector Method.
ISNSL, 487 (1961)

H_2O -61012

W. L. WHITTEMORE, A. W. McREYNOLDS

Inelastic Scattering of Thermal Neutrons
ISNSL, 511 (1961)

H_2O -61013

P. A. EGELSTAFF, S. J. COCKING, R. ROYSTON

The Thermal Neutron Scattering Law for Light and
Heavy Water
ISNSL, 309 (1961)

H_2O -61014

H. H. STILLER, H. R. DANNER

Quasi-Elastic and Inelastic Scattering of Cold Neutrons
from Water
ISNSL, 363 (1961)

H_2O -61015

K. MIKKE

The Scattering of Slow Neutrons by Light and Heavy
Water
ISNSL, 351 (1961)

H_2O -61016

K. HEINLOTH, T. SPRINGER

The Measurement of the Total Cross Section of H_2O
Between -150 and +200°C with Very Slow Neutrons
ISNSL, 323 (1961)

H_2O -61017

D. CRIBIER, B. JACROT

Quasi-Elastic Scattering of Cold Neutrons by Water and
Self-Scattering Coefficient of the Liquid
ISNSL, 347 (1961)

H_2O -61018

R. M. BRUGGER, J. E. EVANS

Slow Neutron Inelastic Scattering Measurements at MTR
ISNSL, 277 (1961)

H_2O -61019

H. PALEVSKY

A Study of the Diffusive Motions of Liquids by Means
of Cold-Neutron Scattering Experiments
ISNSL, 265 (1961)

H_2O -61020

T. SPRINGER

Scattering of Slow Neutron in Water, Ice and Water
Vapour

- Nukleonik*, 3, 110 (1961)
- H₂O-61021
 K. E. LARSSON, S. HOLMRYD, K. OTONES
 Cold Neutron Scattering Experiments on Light and Heavy Water
 ISNSL, 329 (1961)
- H₂O-61022
 T. SPRINGER, W. WIEDMAN
 Investigations of the Scattering Cross Section in Ice for Very Slow Neutrons at 4°K
Z. Physik, 164, 111 (1961)
- H₂O-61023
 KLAUS HEINLOTH
 Scattering of Subthermal Neutrons on H₂O, CH₂O₂ and C₆H₆
Z. Physik, 163, 218 (1961)
- H₂O-62024
 P. A. EGELSTAFF
 The Scattering of Thermal Neutrons by Moderators
Nuclear Sci. and Eng., 12, 250 (1962)
- H₂O-62025
 P. A. EGELSTAFF, P. SCHOFIELD
 On the Evaluation of the Thermal Neutron Scattering Law
Nuclear Sci. and Eng., 12, 260 (1962)
- H₂O-62026
 P. A. EGELSTAFF
 Neutron Scattering Studies of Liquid Diffusion
Adv. Phys., 11, 203 (1962)
- H₂O-62027
 B. C. HAYWOOD, I. M. THORSON
 The Scattering Law for Light and Heavy Water at 20°C and 150°C
 BNL-719 (C-32) Vol. 1, 26 (1962)
- H₂O-62028
 K. E. LARSSON, K. S. SINGWI
 Cold Neutron Scattering and Diffusive Motions in Hydrogen Bond Liquids
Phys. Letters, 3, 145 (1962)
- H₂O-62029
 K. E. LARSSON, U. DAHLBORG
 Some Vibrational Properties of Solid and Liquid H₂O and D₂O Derived from Differential Cross-Section Measurements
J. Nuclear Energy, Pt. AB 16, 81 (1962)
- H₂O-62030
 C. W. LINDENMEIER
 Comparison of Nelkin's Water Kernel with Experiment HW-75228 (1962)
- H₂O-62031
 M. SAKAMOTO, B. N. BROCKHOUSE, R. H. JOHNSON, N. K. POPE
 Neutron Inelastic Scattering Study of Water
J. Phys. Soc. Japan, 17, Suppl. BII, 370 (1962)
- H₂O-62032
 K. M. BRUGGER
 Experimental Information for Thermalization Problems BNL-719 (C-32) Vol. 1, RA-1 (1962)
- H₂O-62033
 G. GOESSMANN
 Calculation of the Total Cross Section for the Scattering of Subthermal Neutrons in Water and Ice by a Crystal Model
Nukleonik, 4, 110 (1962)
- H₂O-62034
 T. SPRINGER
 Some Remarks on the Experimental Information Necessary to Obtain Scattering for Diffusion Problems BNL-719 (C-32) Vol. 1, 54 (1962)
- H₂O-62035
 R. P. SCHOFIELD
 Theoretical Aspects of the Scattering Law BNL-719 (C-32) Vol. 1, RB-1 (1962)
- H₂O-63036
 P. A. EGELSTAFF, B. C. HAYWOOD, I. M. THORSON
 The Motion of Hydrogen in Water
 ISNSL, Vol. 1, 343 (1963)
- H₂O-63037
 D. A. KOTZWITZ, B. R. LEONARD, Jr.
 The Scattering Law for the Room Temperature Light Water
 ISNSL, Vol. 1, 359 (1963)
- H₂O-63038
 D. A. KOTZWITZ, B. R. LEONARD, Jr., R. B. SMITH
 Quasi-Elastic Scattering by Room Temperature Light Water
 ISNSL, Vol. 1, 373 (1963)
- H₂O-63039
 K. E. LARSSON, U. DAHLBORG
 A Study of the Diffusive Atomic Motions in Glycerol and of the Vibratory Motions in Glycerol and Light and Heavy Water by Cold Neutron Scattering
 ISNSL, Vol. 1, 317 (1963)
- H₂O-63040
 A. BAJORIK, V. V. GOLIKOV, I. ZHUKOVSKAJA, F. L. SHAPIRO, A. SHKATULA, E. A. JANIK
 Quasi Elastic Scattering of Cold Neutron in Water
 ISNSL, Vol. 1, 383 (1963)
- H₂O-63041
 SIDNEY YIP, R. K. OSBORN
 Slow-Neutron Scattering by Hindered Rotators
Phys. Rev., 130, 1860 (1963)
- H₂O-63042
 SIDNEY YIP, R. K. OSBORN
 Small Energy Rotational Transitions in Slow-Neutron Scattering by Water
Phys. Rev., 131, 2547 (1963)

H₂O-63043

D. T. GOLDMAN, F. D. FEDERIGHI

Calculation of the Inelastic Scattering of Neutrons from Polyethylene and Water
ISNSL, Vol. 1, 389 (1963)

H₂O-63044

K. S. SINGWI, A. SJÖLANDER, A. RAHMAN

Frequency Spectrum of Liquids and Cold Neutron Scattering
ISNSL, Vol. 1, 215 (1963)

H₂O-63045

C. W. LINDENMEIER, D. D. MATSUMOTO, D. R. SKEEN
Program KERNEL
HW-78288 (1963)

H₂O-63046

B. N. BROCKHOUSE, J. BERGSMA, B. A. DASANNACHARYA,
N. K. POPE
Liquid Dynamics from Neutron Spectrometry
ISNSL, Vol. 1, 189 (1963)

H₂O-64047

K. E. LARSSON, U. DAHLBORG
Proton Motions in Some Hydrogenous Liquids Studied by Cold Neutron Scattering
Physica, 30, 1561 (1964)

H₂O-64048

D. I. PAGE
Scattering Law S(α, β)-Values for H₂O at 550°K
CRRP-1196 (1964)

H₂O-64049

B. U. MOCHOBON, B. C. DUKAPEB, *et al.*
Experimental Studies of Neutron Thermalization
PICG, Vol. 2, 280 (1964)

H₂O-64050

T. SPRINGER, C. HOFMYER, S. KORNBICHLER, H. D. LEMMEL
On the Determination of the Diffusion Constants of H₂O Polyphenyls, ZrH_{1.92}, and D₂O by Neutron Single Scattering Experiments
PICG, Vol. 2, 351 (1964)

H₂O-64051

U. DAHLBORG, G. GROSSHÖG, K. E. LARSSON, E. MÖLLER,
S. N. PUROHIT, N. G. SJÖSTRAND
Investigations into the Moderating Properties Water
PICG, Vol. 2, 336 (1964)

H₂O-64052

J. C. YOUNG, D. HUFFMAN
Experimental and Theoretical Neutron Spectra
GA-5319 (1964)

H₂O-65053

N. K. POPE, R. NATION
The Van Hove Scattering Function for Water
ISN, Vol. 2, 141 (1965)

H₂O-65054

W. GLÄSER, G. EHRET, A. MERKEL
Recent Measurements of the Scattering Laws of Some

Hydrogenous Moderators

ISN, Vol. 2, 167 (1965)

H₂O-65055

H. PALEVSKY

A Study of the Diffusive Motions of Liquids by Means of Cold-Neutron Scattering Experiments
ISN, Vol. 2, 265 (1965)

H₂O-65056

V. F. TURCHIN

Calculation of Differential Scattering Cross-Section of Slow Neutron by Time Integration (in Russian)
Atomnaya Energiya, 19, 428 (1965)

H₂O-65057

J. R. BEYSTER *et al.*

Integral Neutron Thermalization
GA-6096 (1965)

H₂O-65058

J. A. YOUNG, J. U. KOPPEL

Calculation of Thermal Scattering Kernels
GA-6281 (1965)

H₂O-65059

V. V. GOLIKOV, I. ZHOKOVSKJA, F. L. SHAPIRO, A. SHKATULA
E. JANIK

Slow Neutron Scattering in Water and Some Organic Substances
ISN, Vol. 2, 201 (1965)

H₂O-65060

J. R. BEYSTER, J. C. YOUNG, J. M. NEILL, W. R. MOWRY
Differential Neutron Scattering from Hydrogenous Moderators

Pulsed Neutron Research,
Vol. 1, 407 (1965) IAEA

H₂O-65061

HANS-DISTRICH LEMMEL

Determination of Diffusion Constants D(E; T) and $\bar{D}_v(T)$ of Thermal Neutrons in H₂O, Phenylene, ZrH_{1.92} and D₂O by Measurement of the Scattering Angular Distribution $4\pi/\sigma \cdot d\sigma/d\Omega$. Part 1. H₂O
Nukleonik, 7, 266 (1965)

H₂O-65062

J. A. JANIK

Molecular Dynamics Investigated by Neutron Scattering
ISN, Vol. 2, 243 (1965)

H₂O-65063

A. BAJOREK, T. A. MACHEKHINA, K. PARLINSKY

Investigation of the Dynamics of NH₄⁺ and H₂O Molecular Groups in Crystals
ISN, Vol. 2, 355 (1965)

H₂O-66064

H. L. McMURRY, G. J. RUSSELL, R. M. BRUGGER

Slow-Neutron Scattering by Water

Nuclear Sci. and Eng., 25, 248 (1966)

H₂O-66065

H. L. McMURRY

- Slow Neutron Scattering Kernels for H₂O at 423°K and 550°K
IN-1019 (1966)
- H₂O-66066
O. K. HARLING
Slow Neutron Scattering from H₂O
WASH-1068 (EANDC (US) 85U) (1966)
- H₂O-66067
O. K. HARLING
Slow-Neutron Width of 200 meV Vibration Level in Liquid H₂O
Phys. Letters, **22**, 15 (1966)
- H₂O-66068
J. R. BAPTER, G. CARRIVEAN
Differential Neutron Scattering Cross Section Measurements
WASH-1068 (EANDC (US) 85U), (1966)
- H₂O-66069
G. J. KIROUAC, W. E. MOORE, K. W. SEEMAN
Double Differential Scattering Cross Sections and Scattering Law for H₂O at 302°K
KAPL-M-6536 (1966)
- H₂O-66070
G. J. KIROUAC, W. E. MOORE, K. W. SEEMAN
Inelastic Scattering Cross Sections for Polyethylene and Water in the Gas Transition Region
Nuclear Sci and Eng., **25**, 300 (1966)
- H₂O-66071
H. J. PRASK, H. BOUTIN
Low-Frequency Motions of H₂O Molecules in Crystal III
J. Chem. Phys., **45**, 3284 (1966)
- H₂O-66072
J. U. KOPPEL
Neutron Scattering by Hydrogenous Moderators
GA-7055 (1966)
- H₂O-66073
H. ANTUNEZ *et al.*
Integral Neutron Thermalization
GA-7091 (1966)
- H₂O-66074
A. SZKATULA, A. FULINSKI
Dynamical and Thermodynamical Structure of Water from the Scattering of Cold Neutrons
INP-501-PS (1966)
- H₂O-66075
J. R. BEYSTER, J. M. NEILL, J. C. YOUNG
Recent Developments in Integral Neutron Thermalization
Reactor Physics in the Resonance and Thermal Regions, Vol. 1, 151 (1966), M. I. T. Press
- H₂O-66076
J. U. KOPPEL
Neutron Scattering by Hydrogenous Moderators
Reactor Physics in the Resonance and Thermal Regions, Vol. 1, 3 (1966), M. I. T. Press
- H₂O-67077
A. N. GOLAND, K. OTNES
Quasi-Elastic Scattering of Slow Neutrons by Water and Aqueous Solution of Sodium Chloride
Phys. Rev., **153**, 184 (1967)
- H₂O-67078
B. C. HAYWOOD
The Spectral Density of Hydrogen in Water
J. Nuclear Energy, **21**, 249 (1967)
- H₂O-67079
G. J. KIROUAC
A Comparison of Scattering Law Data and Calculation for Water
KAPL-P-3179 (1967)
- H₂O-67080
H. L. McMURRAY
Preparation of H₂O and D₂O Slow Neutron Scattering Kernels for ENDF using MR Type Models
IN-1065 (1967)
- H₂O-67081
K. SKÖLD, L. KARLEN, J. SCIESINSKI
A Specimen Container for Inelastic Neutron Scattering Studies of Liquids at High Pressures
Nucl. Instr. and Methods, **56**, 305 (1967)
- H₂O-67082
H. IBARRA, Jr., R. SHER
Thermal Neutron Spectrum Measurements by Foil Activation
Nucl. Sci. and Eng., **29**, 7 (1967)
- H₂O-67083
R. B. SMITH
Some Measurements of the Neutron Scattering Law for Light Water at 95°C
BNWL-345 (1967)
- H₂O-67084
G. S. SAMOSVAT, Yu. S. SAYASIV, V. T. CHUBRKOV
Scattering of the eV-Neutrons by Water Molecules
JINR P 3-3414 (1967)
- H₂O-67085
F. BISHOFF, W. A. BRYANT, L. J. ESCH, C. LAJEUNÈSSE, W. E. MOORE, S. S. PAN, S. N. PUROHIT, M. L. YEATER
Epithermal Neutron Inelastic Scattering
WASH-107 (1967)
- H₂O-67086
A. SZKATULA, A. FULINSKI
Dynamical and Thermodynamical Structure of Water from the Scattering Cold Neutrons
Physica, **36**, 35 (1967)
- H₂O-67087
Y. NAKAHARA, O. KATO
FREDAM-BI, A FORTRAN-IV Program for Computation of the Frequency Distributions of Beryllium and Ice by Root Sampling Method
JAERI-1146 (1967)

H₂O-68088

J. R. BEYSTER

Neutron Scattering from Light Water
Nuc. Sci. and Eng., **31**, 254 (1968)H₂O-68089

P. FAURE, A. KAHANE

Interpretation of Optical Spectra of Low Frequency of
Ice by Mean of a Dynamic Model of Crystalline Lattice
J. Phys. Radium, **28**, 944 (1968)H₂O-68090

R. G. JARVIS

Calculation and the Thermal Scattering Law for Solids
and LiquidsNeutron Thermalization and Reactor Spectra, Vol. 1,
261 (1968), IAEAH₂O-68091

A. G. GIBBS, C. W. LINDEMAYER

Analytical Evaluation of the Large Time Contribution
to Neutron Scattering Cross SectionsNeutron Thermalization and Reactor Spectra, Vol. 1,
271 (1968), IAEAH₂O-68092G. J. KIROUAC, W. E. MOORE, L. J. ESCH, K. W. SEEMAN,
M. L. YEATEREpithermal Neutron Inelastic Scattering and Scattering
Law for H₂ONeutron Thermalization and Reactor Spectra, Vol. 1,
389 (1968), IAEAH₂O-68093

B. C. HAYWOOD, P. I. PAGE

The Scattering Law for Heavy Water at 540°K and
Light Water at 550°KNeutron Thermalization and Reactor Spectra, Vol. 1,
361 (1968), IAEAH₂O-68094

E. L. SLAGGIE

Multiple Scattering in Neutron Double Differential Cross
Section MeasurementsNeutron Thermalization and Reactor Spectra, Vol. 1,
311 (1968), IAEAH₂O-68095

W. GLÄSER

A Review of Scattering Law Studies for Moderators
Neutron Thermalization and Reactor Spectra, Vol. 1,
235 (1968), IAEAH₂O-68096

D. K. ROSS, F. P. SZABO, Y. SNALAN

The Inelastic Scattering of Neutrons from Benzene and
WaterNeutron Thermalization and Reactor Spectra, Vol. 1,
477 (1968), IAEAH₂O-68097

J. O. BURGMAN, J. SCIESINSKI, K. SKÖLD

Proton Dynamics in Water and Ice Studied by Inelastic
Scattering of Slow Neutrons
Phys. Rev., **170**, 808 (1968)H₂O-68098

H. PRASK, H. BOUTIN, S. YIP

Frequency Spectrum of Hydrogenous Molecular Solid
by Inelastic Neutron Scattering. Hexagonal H₂O Ice
J. Chem. Phys., **48**, 3367 (1968)H₂O-68099

J. A. JANIK

Molecular Dynamics Studied by Neutron Inelastic Scat-
tering and Computing Method
INP-600/PS (1968)H₂O-68100

Y. NAKAHARA

Phonon Spectrum and Thermal Neutron Scattering in
Light Water Ice
J. Nucl. Sci. Technol., **5**, 635 (1968)H₂O-68101

R. M. BRUGGER

Slow Neutron Scattering from Water
Nuclear Sci. and Eng., **33**, 187 (1968)H₂O-68102

J. M. NEIL, J. L. RUSSEL, Jr., J. R. BROWN

Total Neutron Cross Section of Water
Nuclear Sci. and Eng., **33**, 265 (1968)H₂O-68103

D. I. PAGE, B. C. HAYWOOD

The Harwell Scattering Law Programme: Frequency
Distributions of Moderators
AERE-R-5778 (1968)H₂O-68104P. B. PARKS, D. J. PELLARIN, N. H. PROCHNOW, N. P.
BAUMANThermal Neutron Diffusion in Light and Heavy Water
DP-1090 (1968)H₂O-68105

W. GLÄSER

Studies of Inelastic Scattering of Slow Neutron by
Moderators
Nukleonik, **11**, 282 (1968)H₂O-68106

V. ANDENTE, G. GALLS

Hindered-Rotations Effect on Neutron Thermalization in
Light Water
Nukleonik, **11**, 251 (1968)

2. 2. Heavy Water

D₂O-55001

B. JACROT, F. NETTER, M. GALULA

Time-of-Flight Spectrometry Equipment for Slow Neut-
rons in Use at the Saclay; Its Application to a Study
of the Inelastic Scattering of Cold Neutrons
PICG, Vol. **5**, 77 (1955)D₂O-58002

B. N. BROCKHOUSE

Structural Dynamics of Water by Neutron Spectrometry
Nuovo Cimento, **9**, 45 (1958)

D₂O-60003

K. E. LARSSON, S. HOLMRYD, K. OTNES

An Experimental Study of the Scattering of Slow Neutrons from H₂O and D₂O
AE-47 (1960)

D₂O-61004

P. A. EGELSTAFF, S. J. COCKING, R. ROYSTON

The Thermal Neutron Scattering Law for Light and Heavy Water
ISNSL, 309 (1961)

D₂O-61005

K. MIKKE

The Scattering of Slow Neutrons by Light and Heavy Water
ISNSL, 351 (1961)

D₂O-61006

K. E. LARSSON, S. HOLMRYD, K. OTNES

Cold Neutron Scattering Experiments on Light and Heavy Water
ISNSL, 329 (1961)

D₂O-61007

A. D. B. WOODS, B. N. BROCKHOUSE, M. SAKAMOTO, R. N. SINCLAIR
Energy Distributions of Neutrons Scattered from Graphite, Light and Heavy Water, Ice, Zirconium Hydride, LiH-rium Hydride, Sodium Hydride and Ammonium Chloride by the Beryllium Detector Method.
ISNSL, 487 (1961)

D₂O-61008

W. L. WHITTEMORE, A. W. McREYNOLDS

Inelastic Scattering of Thermal Neutrons Produced by an Electron Accelerator
ISNSL, 511 (1961)

D₂O-61009

WOLFRAM GISSLER, CHRISTIAN REINSCH, TASSO SPRINGER
Investigation of Neutron Scattering Cross Section for Heavy Ice Near the Bragg Cut-Off Wavelength
Z. Kristallographie, 116, 328 (1961)

D₂O-62010

K. E. LARSSON, U. DAHLBORG

Some Vibrational Properties of Solid and Liquid H₂O and D₂O Derived from Experimental Cross-Section Measurements

Reactor Sci. Tech., 16, 81 (1962)

D₂O-62011

R. M. BRUGGER

Experimental Information for Thermalization Problems
BNL-719 (C-32) Vol. 1, RA-I (1962)

D₂O-62012

B. C. HAYWOOD, I. M. THORSON

The Scattering Law for Light and Heavy Water at 20°C
BNL-719 (C-32) Vol. 1, 26 (1962)

D₂O-62013

H. C. HONECK

An Incoherent Thermal Scattering Model for Heavy Water

Trans. Am. Nuclear Soc., 5, 47 (1962)

D₂O-62014

P. A. EGELSTAFF

The Scattering of Thermal Neutrons by Moderator
Nuclear Sci. and Eng., 12, 250 (1962)

D₂O-63015

K. E. LARSSON, U. DAHLBORG

A Study of the Diffusive Atomic Motions in Glycerol and of the Vibratory Motions in Glycerol and Light and Heavy Water by Cold Neutron Scattering
ISNSL, Vol. 1, 317 (1963)

D₂O-63016

D. BUTLER

The Scattering of Slow Neutron by Heavy Water-I.
Intramolecular Scattering
Proc. Phys. Soc., 81, 276 (1963)

D₂O-63017

D. BUTLER

The Scattering of Slow Neutrons by Heavy Water-II.
Intermolecular Scattering
Proc. Phys. Soc., 81, 294 (1963)

D₂O-63018

WOLFRAM GISSLER

Investigation of Neutron Scattering Cross Section Near the Bragg Cut-Off Wavelength
Z. Kristallographie, 118, 149 (1963)

D₂O-64019

K. E. LARSSON, U. DAHLBORG

Proton Motions in Some Hydrogenous Liquids Studied by Cold Neutron Scattering
Physica, 30, 1561 (1964)

D₂O-64020

D. C. HAYWOOD

A Compilation of the Scattering Law for Heavy Water at 220°C and 150°C
AERE-R 4582 (1964)

D₂O-64021

N. MATEESCU, H. TEUTSCH, V. NAHORNIAK, A. DIACONESCU, P. TIMIS

The Temperature Dependence of Neutron Inelastic Scattering in Heavy Water
PICG, Vol. 2, 403 (1964)

D₂O-64022

T. SPRINGER, C. HOFMEYER, S. KORNBIHLER, D. H. LEMMEL
On the Determination of the Diffusion Constants of H₂O Polyphenyls, ZrH_{1.92} and D₂O by Neutron Single-Scattering Experiments
PICG, Vol. 2, 351 (1964)

D₂O-65023

U. DAHLBORG, G. GROSSHOG, K. E. LARSSON, E. MÖLLER, S. N. PUROHIT, N. G. SJÖSTRAND

Investigations into the Moderating Properties of Water
PICG, Vol. 2, 336 (1965)

D₂O-65024

J. A. YOUNG, J. U. KOPPEL

- Calculation of Thermal Scattering Kernels
GA-6281 (1965)
- D₂O-65025
J. R. BEYSTER, *et al.*
Integral Neutron Thermalization
GA-6096 (1965)
- D₂O-65026
J. U. KOPPEL, J. A. YOUNG
The Role of Interference Scattering in Neutron Thermalization by Heavy Water
Nukleonik, 7, 408 (1965)
- D₂O-65027
SIERGFRIED KORNBICHLER
Determination of the Diffusion Constants $D(E_0, T)$ and $\bar{Dv}(T)$ of the Thermal Neutrons in H₂O, Phenylene, ZrH_{1.92} and D₂O by Measurement of Scattering Angular Distributions II. Zirconium Hydride and Heavy Water
Nukleonik, 7, 281 (1965)
- D₂O-65028
J. R. BEYSTER, J. C. YOUNG, J. M. NEILL, W. R. MOWRY
Differential Neutron Scattering from Hydrogenous Moderators
Pulsed Neutron Research,
Vol. 1, 407 (1965), IAEA
- D₂O-66029
H. ANTUNEZ, *et al.*
Integral Neutron Thermalization
GA-7091 (1966)
- D₂O-66030
O. K. HARLING
Slow Neutron Scattering from D₂O
WASH-1068 (EANDC-US 85U) 152 (1966)
- D₂O-66031
H. L. McMURRY
Model for Calculating the Slow Neutron Scattering by Liquid D₂O
IN-1020 (1966)
- D₂O-66032
WHITTEMORE
Differential Neutron Thermalization
GA-7287 (1966)
- D₂O-66033
J. R. BEYSTER, J. M. NEILL, J. C. YOUNG
Recent Developments in Integral Neutron Thermalization
Reactor Physics in the Resonance and Thermal Regions,
Vol. 1, 151 (1966), M. I. T. Press
- D₂O-67034
H. L. McMURRY
Preparation of H₂O and D₂O Slow Neutron Scattering Kernels for ENDF Using MR-Type Models
IN-1605 (1967)
- D₂O-67035
W. L. WHITTEMORE
- Differential Neutron Thermalization
GA-7439 (TID-4500), (1967)
- D₂O-68036
O. K. HERLING
Slow-Neutron Inelastic Scattering and Dynamics of Heavy Water
Nuclear Sci. and Eng., 33, 41 (1968)
- D₂O-68037
W. L. WHITTEMORE
Inelastic Thermal-Neutron Scattering by Liquid D₂O
Nuclear Sci. and Eng., 33, 195 (1968)
- D₂O-68038
E. GLÄSER
A Review of Scattering Law Studies for Moderators
Neutron Thermalization and Reactor Spectra, Vol. 1, 235 (1968), IAEA
- D₂O-68039
B. C. HAYWOOD, P. I. PAGE
The Scattering Law for Heavy Water at 540°K and Light Water 550°K
Neutron Thermalization and Reactor Spectra, Vol. 1, 361 (1968), IAEA
- D₂O-68040
D. I. PAGE, B. C. HAYWOOD
The Harwell Scattering Law Programme; Frequency Distributions of Moderators
AERE-R-5778 (1968)
- D₂O-68041
P. B. PARKS, D. J. PELLARIN, N. H. PROCHNOW, N. P. BAUMAN
Thermal Neutron Diffusion in Light and Heavy Water
DP-1090 (1968)
- D₂O-68042
W. GLÄSER
Studies of Inelastic Scattering of Slow Neutron by Moderators
Nukleonik, 11, 282 (1968)
- ### 2.3. Hydrogen Fluoride
- HF-67001
J. S. KITTELBERGER, D. F. HORNIG
Vibrational Spectrum of Crystalline HF and DF
J. Chem. Phys., 46, 3099 (1967)
- ### 2.4. Hydrogen Chloride
- HCl-68001
G. C. SUMMERFIELD, P. F. ZWEIFEL
Quasi-Classical Approximation for Scattering from Molecules
Neutron Thermalization and Reactor Spectra, Vol. 1, 283 (1968), IAEA
- HCl-68002
ASHOK K. AGKAWAL, S. YIP

Rotational Correlation Functions in Neutron Scattering by Molecular Gases
Phys. Rev., **171**, 263 (1968)

2.5. Lithium Hydride

LiH-61001

A. D. B. WOODS, B. N. BROCKHOUSE, N. SAKAMOTO, B. N. SINCLAIR

Energy Distributions of Neutrons Scattered from Graphite, Light and Heavy Water, Ice, Zirconium Hydride, Lithium Hydride, Sodium Hydride and Ammonium Chloride by the Beryllium Detector Method.

ISNSL, **487** (1961)

LiH-65002

M. G. ZEMLYANOV, E. G. BROVMAN, N. A. CHERNOPELKOV, Iu. L. SHITIKOV, *et al.*

Study of Dynamics of Lithium Hydride and Deuteride by Inelastic Scattering of Cold Neutron

LA-TR-65-35 (1965)

LiH-65003

M. H. BRODSKY, E. BURSTEIN

Applicability of the "Shell Model" to the Lattice Vibrations of LiH

"Lattice Dynamics" (ed. by R. F. WALLIS) 175 (1965), Pergamon Press

LiH-67004

J. L. VERBLE

Lattice Dynamics of Lithium Hydride

LA-3750 (1967)

LiH-68005

J. L. VERBLE, J. L. WARREN, J. L. YARNELL

Lattice Dynamics of Lithium Hydride

Phys. Rev., **168**, 980 (1968)

2.6. Lithium Fluoride

LiF-68001

G. DOLLING, H. G. SMITH, R. M. NICKLOW, P. R. VIJAYA-RAGHAVAN, M. K. WILKINSON

Lattice Dynamics of Lithium Fluoride

Phys. Rev., **168**, 970 (1968)

2.7. Lithium Sulfate

Li₂SO₄-68001

J. A. JANIK

Molecular Dynamics Studied by Neutron Inelastic Scattering and Computing Method

INP-600/PS (1968)

2.8. Beryllium Oxide

BeO-63001

R. N. SINCLAIR

The Neutron Scattering Law and the Frequency Distribution of the Normal Modes of Beryllium and Beryllium Oxide

ISNSL, Vol. **2**, 199 (1963)

BeO-64002

A. W. PRYOR

The Electrical Conductivity of Beryllium Oxide

J. Nuclear Material, **14**, 258 (1964)

BeO-64003

A. W. PRYOR, T. M. SABINE

Thermal Vibrations in BeO

J. Nuclear Materials, **14**, 275 (1964)

BeO-64004

B. C. HAYWOOD, R. N. SINCLAIR

A Compilation of the Scattering Law for Graphite, Beryllium and Beryllium Oxide at 22°C

AERE-R-4732 (1964)

BeO-65005

E. H. OTTEWITTE

The Effect of Temperature, Microstructure of Sintered Beryllium Oxide on the Scattering Cross Sections for a SNAP Reactor

NAA-SR-MEMO-11604 (1965)

BeO-66006

G. G. BENTLE

Elastic Constants of Single-Crystal BeO at Room Temperature

J. Am. Ceram. Soc., **49**, 125 (1966)

BeO-66007

H. ANTUNEZ, *et al.*

Integral Neutron Thermalization

GA-7091 (1966)

BeO-66008

J. R. BEYSTER, J. M. NEILL, J. C. YOUNG

Recent Developments in Integral Neutron Thermalization Reactor Physics in the Resonance and Thermal Regions, Vol. **1**, 151 (1966), M. I. T. Press

BeO-66009

JAMES A. YOUNG

Atomic Motion in Moderators

Reactor Physics in the Resonance and Thermal Regions, Vol. **1**, 3 (1966), M. I. T. Press

BeO-67010

R. M. BRUGGER, K. A. STRONG, J. M. CARPENTOR

BeO Dispersion Relations

WASH-1068 (EANDC (US) 85U) (1966)

BeO-67011

R. M. BRUGGER, K. A. STRONG

Lattice Vibrations of BeO

J. Phys. Chem. Solids, **28**, 249 (1967)

BeO-68012

EUGENE LOH

Optical Phonons in BeO Crystals

Phys. Rev., **166**, 673 (1968)

BeO-68013

W. GLÄSER

A Review of Scattering Law Studied for Moderators

Neutron Thermalization and Reactor Spectra, Vol. **1**, 235 (1968), IAEA

BeO-68014

G. L. OSTHEIMER, R. E. SCHMUNK, R. J. KEARNEY
 Phonon Dispersion Relation of Beryllium Oxide
 IN-1129 (1968)

BeO-68015

G. BORGONOV
 Lattice Dynamics and Neutron Scattering of BeO
 GA-8758 (1968)

BeO-68016

D. I. PAGE, B. C. HAYWOOD
 The Harwell Scattering Law Programme: Frequency
 Distributions of Moderators
 AERE-R-5778 (1968)

BeO-68017

W. GLÄSER
 Studies of Inelastic Scattering of Slow Neutrons by
 Moderators
Nukleonik, 11, 282 (1968)

2.9. Carbon Dioxide

CO₂-66001

L. BATA, N. KROÓ
 Inelastic Neutron Scattering by Density Fluctuations in
 CO₂ near the Critical Point
Phys. Letters, 24 A, 57 (1966)

CO₂-68002

S. H. WALMSLEY
 Lattice Vibrations and Elastic Constants of Molecular
 Crystals in Pair Potential Approximation
J. Chem. Phys., 48, 1438 (1968)

2.10. Dicarbon Hexafluoride

C₂F₆-67001

JOHN M. CARPENTER
 Orientation-Averaged Amplitude of the One-Quantum
 Term in the Neutron Scattering Law for Molecular
 Gases
J. Chem. Phys., 46, 465 (1967)

C₂F₆-68002

J. M. CARPENTER, R. A. SCHAEFER
 Amplitude of the Two Quantum Term in the Scattering
 Law for Molecular Gases
 Neutron Thermalization and Reactor Spectra, Vol. 1,
 293 (1968), IAEA

2.11. Ammonia

NH₃-67001

F. J. WEBB
 The Inelastic Scattering of Cold Neutrons by Methane
 and Ammonia
Proc. Phys. Soc. (London), 92, 912 (1967)

NH₃-67002

T. OKA
 Vibration-Rotation Interaction in Symmetric-Top Mole-

cules and the Splitting between A₁, A₂ Levels
J. Chem. Phys., 47, 5410 (1967)

NH₃-68003

J. A. JANIK
 Molecular Dynamics Studied by Neutron Inelastic Scat-
 tering and Computing Method
 INP-600/PS (1968)

NH₃-68004

ASHOK K. AGKAWAL, S. YIP
 Rotational Correlation Functions in Neutron Scattering
 by Molecular Gases
Phys. Rev., 171, 263 (1968)

2.12. Ammonium Nitrate

NH₄NO₃-63001

K. MIKKE, A. KROH
 Lattice Dynamics of Some Ammonium Salts by Inverted
 Filter Method
 ISNSL, Vol. 2, 237 (1963)

2.13. Ammonium Fluoride

NH₄F-63001

K. MIKKE, A. KROH
 Lattice Dynamics of Some Ammonium Salts by Inverted
 Filter Method
 ISNSL, Vol. 2, 237 (1963)

2.14. Ammonium Chloride

NH₄Cl-61001

A. D. B. WOODS, B. N. BROCKHOUSE, M. SAKAMOTO, R. N.
 SINCLAIR
 Energy Distributions of Neutrons Scattered from Graphite,
 Light and Heavy Water, Ice, Zirconium Hydride, Lith-
 ium Hydride, Sodium Hydride and Ammonium Chloride
 by the Beryllium Detector Method
 ISNSL, 487 (1961)

NH₄Cl-63002

G. VENKATARAMAN, K. USHA, P. K. IVENGER
 Study of Ammonium Halides by Neutron Spectrometry
 ISNSL, Vol. 2, 253 (1963)

NH₄Cl-63003

K. MIKKE, A. KROH
 Lattice Dynamics of Some Ammonium Salts by Inverted
 Filter Method
 ISNSL, Vol. 2, 237 (1963)

NH₄Cl-66004

B. BROCKER
 Total Neutron Cross Section Measurement in Hydro-
 geneous Compounds
 EANDC(E) 66 "U" (1966)

NH₄Cl-68005

S. H. CHEN, V. DVORAK
 Group-Theoretical Analysis of Lattice Vibrations in
 Molecular Crystal
J. Chem. Phys., 48, 4060 (1968)

2. 15. Ammonium Bromide

NH₄Br-63001

G. VENKATARAMAN, K. USHA, P. K. IYENGER

Study of Ammonium Halides by Neutron Spectrometry
ISNSL, Vol. 2, 253 (1963)

NH₄Br-63002

K. MIKKE, A. KROH

Lattice Dynamics of Some Ammonium Salts by Inverted
Filter Method
ISNSL, Vol. 2, 237 (1963)

NH₄Br-66003

B. BROCKER

Total Neutron Cross Section Measurement in Hydro-
geneous Compounds
EANDC(E) 66 "U" (1966)

2. 16. Ammonium Iodide

NH₄I-63001

K. MIKKE, A. KROH

Lattice Dynamics of Some Ammonium Salts by Inverted
Filter Method
ISNSL, Vol. 2, 237 (1963)

NH₄I-66002

G. KOSALY, G. SOLT

Slow Neutron Scattering by Solid CH₄ and NH₄I
Physica, 32, 1571 (1966)

NH₄I-66003

B. BROCKER

Total Neutron Cross Section Measurment in Hydro-
geneous Compounds
EANDC(E) 66 "U" (1966)

2. 17. Sodium Hydride

NaH-61001

A. D. B. WOODS, B. N. BROCKHOUSE, M. SAKAMOTO, R. N.
SINCLAIR

Energy Distributions of Neutrons Scattered from Graphite,
Light and Heavy Water, Ice, Zirconium Hydride,
Lithium Hydride, Sodium Hydride and Ammonium
Chloride by the Beryllium Detector Method
ISNSL, 487 (1961)

2. 18. Sodium Iodide

NaI-60001

A. D. B. WOODS, W. COCHRAN, B. N. BROCKHOUSE
Lattice Dynamics of Alkali Halide Crystal
Phys. Rev., 119, 980 (1960)

NaI-63002

A. D. B. WOODS, B. N. BROCKHOUSE, R. A. COWLEY, W.
COCHRAN
Lattice Dynamics of Alkali Halide Crystals-II. Experimental
Studies of KBr and NaI
Phys. Rev., 131, 1025 (1963)

2. 19. Magnesium Oxide

MgO-65001

G. PECKHAM

Phonon Dispersion Relations in Magnesium Oxide
"Lattice Dynamics" (ed. by B. F. WALLIS) 49 (1965),
Pergamon Press

MgO-67002

G. PECKHAM

The Phonon Dispersion Relation for Magnesium Oxide
Proc. Phys. Soc., 90, 657 (1967)

MgO-67003

R. J. BUCKLAND, D. H. SAUNDERSON

Longitudinal Optic Modes in Magnesium Oxide
AERE-R-5467 (1967)

MgO-67004

D. G. MARTIN

A Study of Very Small Defect Clusters in Irradiated
Magnesium Oxide; Using Long-Wavelength Neutron
Scattering Measurements
AERE-R-5521 (1967)

MgO-67005

K. H. RIEDER, E. M. HÖRL

Search for Surface Modes of Lattice Vibrations in
Magnesium Oxide
SGAE-M-12/1967 (1967)

MgO-68006

D. G. MARTIN

A Study of Very Small Defect Clusters in Irradiated
Magnesium Oxide, Using Long-Wavelength Neutron
Scattering Measurements

Proc. Phys. Soc., Ser. 2, 1, 333 (1968)

2. 20. Aluminium Nitride

AlN-67001

A. T. COLLINS, E. C. LIGHTOWLERS, P. J. DEAN

Lattice Vibration Spectra of Aluminum Nitride

Phys. Rev., 158, 833 (1967)

2. 21. Potassium Dihydrogen Phosphate

KH₂PO₄-63001

H. PALEVSKY, K. OTNES, Y. WAKUTA

Low Frequency Hydrogen Vibrations in Potassium
Dihydrogen Phosphate

ISNSL, Vol. 2, 273 (1963)

KH₂PO₄-67002

R. BLINC, V. DIMIC, J. PETKOVISKI, E. P. PIEKMAJER

Study of Proton Dynamics in Paraelectric KH₂PO₄ by
Quasi-Elastic Cold Neutrons Scattering

Phys. Letters, 26 A, 8 (1967)

KH₂PO₄-68003

C. SCHENK, E. WIENER, B. WECKERMANN, W. KLEY

Disappearance of a Vibrational Mode in the Ferroelectric

Phase Transition of KH_2PO_4
Phys. Rev., 172, 576 (1968)

2. 22. Potassium Chloride

KCl-67001

V. I. STARTSEV, I. V. BRAUDE

The Dispersion of Elastic Oscillation in the Crystal Lattice of Potassium Chloride, as Determined from the Diffusive X-ray Scattering
Doklady Akademii Nauk, 172, 1053 (1967)

KCl-67002

V. I. IVEUONNOVA, PARANGTOPO, A. P. ZVYAGINA

X-ray Determination of Dispersion Curves of the Ionic Crystals KCl and KI
Soviet Phys. Solid State, 9, 1265 (1967)

2. 23. Potassium Bromide

KBr-63001

A. D. B. WOODS, B. N. BROCKHOUSE, R. A. COWLEY, W. COCHRAN

Lattice Dynamics of Alkali Halide Crystals-II. Experimental Studies of KBr and NaI
Phys. Rev., 131, 1025 (1963)

KBr-68002

E. C. SVENSSON, W. L. BUYERS

Experimental Difference Between First and Zero Sound in KBr
Phys. Rev., 165, 1063 (1968)

2. 24. Potassium Iodide

KI-66001

G. DOLLING, R. A. COWLEY, C. SCHITTENHELM

Normal Vibrations of Potassium Iodide
Phys. Rev., 147, 577 (1966)

KI-67002

V. I. IVERNOVA, PARANGTOPO, A. P. ZVYAGINA

X-ray Determination of Dispersion Curves of the Ionic Crystals KCl and KI
Soviet Phys. Solid State, 9, 1265 (1967)

2. 25. Calcium Fluoride

CaF₂-63001

D. CRIBIER, B. FARNOUX, B. JACROT

Frequency of Optical Vibrations in Fluorite CaF₂
ISNSL, Vol. 2, 225 (1963)

2. 26. Cobalt Oxide

CoO-68001

J. SAKURAI, W. J. L. BUYERS, R. A. COWLEY, G. DOLLING
 Crystal Dynamics and Magnetic Excitations in Cobaltous Oxide

Phys. Rev., 167, 510 (1968)

2. 27. Gallium Arsenide

GaAs-63001

J. L. T. WAUGH, G. DOLLING

Crystal Dynamics of Gallium Arsenide
Phys. Rev., 132, 2410 (1963)

GaAs-65002

G. DOLLING, J. L. T. WAUGH

Normal Vibrations in Gallium Arsenide
 "Lattice Dynamics" (ed. by R. F. WALLIS), 19 (1965),
 Pergamon Press

2. 28. Rubidium Iodide

RbI-60001

D. H. SAUNDERSON

Pressure Dependence of the TA [100] Zone-Boundary Phonon Frequency in Rubidium Iodide
Phys. Rev. Letters, 17, 530 (1960)

RbI-65002

J. R. HARDY, A. M. KARO

Lattice Dynamics of Rubidium Iodide in Relation to the NaCl-CsCl Phase Transition
 "Lattice Dynamics" (ed. by R. F. WALLIS), 195 (1965),
 Pergamon Press

2. 29. Strontium Titanate

SrTiO₃-62001

R. A. COWLEY

Temperature Dependence of a Transverse Optic Mode in Strontium Titanate
Phys. Rev. Letters, 9, 159 (1962)

SrTiO₃-63002

R. A. COWLEY

The Temperature Dependence of Some Normal Modes in Strontium Titanate
ISNSL, Vol. 2, 229 (1963)

SrTiO₃-64003

R. A. COWLEY

Lattice Dynamics and Phase Transitions of Strontium Titanate
Phys. Rev., 134, 981 (1964)

SrTiO₃-67004

S. P. SOLOVIEV, N. L. KUKHTO, N. A. CHRONPLEKOV, M. G. ZETLYANOV

Scattering of Cold Neutrons by Polycrystalline Barium, Strontium and Lead Titanates
Soviet Phys. Solid State, 8, 2156 (1967)

SrTiO₃-68005

P. A. FLEURY, J. F. SCOTT, J. M. WORLOCK

Soft Phonon Modes and the 110°K Phase Transition in SrTiO₃

Phys. Rev. Letters, 21, 16 (1968)SrTiO₃-69006

Y. YAMADA, G. SHIRANE

Neutron Scattering and Nature of the Soft Optical Phonon in SrTiO_3
J. Phys. Soc. Japan, **26**, 396 (1969)

2.30. Yttrium Vanadate

YVO_4 -68001

S. A. MILLER, H. H. CASPERS, H. E. RAST
 Lattice Vibrations of Yttrium Vanadate
Phys. Rev., **168**, 964 (1968)

2.31. Tin Dioxide

SnO_2 -67001

E. G. BROVMAN, YU. KAGAN
 On the Phonon Spectrum of Metals
Soviet Phys. JETP, **52**, 557 (1967)

2.32. Cesium Chloride

CsCl -68001

A. M. KARO, J. K. HARDY
 Lattice Dynamics and Specific Heat Data of CsCl , CsBr and CsI
J. Chem. Phys., **48**, 3173 (1968)

2.33. Cesium Bromide

CsBr -68001

A. M. KARO, J. R. HARDY
 Lattice Dynamics and Specific Heat Data of CsCl , CsBr and CsI
J. Chem. Phys., **48**, 3173 (1968)

2.34. Cesium Iodide

CsI -68001

A. M. KARO, J. R. HARDY
 Lattice Dynamics and Specific Heat Data of CsCl , CsBr and CsI
J. Chem. Phys., **48**, 3173 (1968)

2.35. Barium Titanate

BaTiO_3 -65001

I. PELAH, I. LEEKOWITE
 Inelastic Neutron Spectra from Ferro-Electric and Para-Electric BaTiO_3
ISNSL, 601 (1961)

BaTiO_3 -67002

S. P. SOLOVIEV, O. L. KUKHTO, N. A. CHERNOBLEKOV, M. G. ZETLYANOV
 Scattering of Cold Neutrons by Polycrystalline Barium, Strontium and Lead Titanates
Soviet Phys. Solid State, **8**, 2156 (1967)

2.36. Lanthanum Chloride

LaCl_3 -65001

H. H. CASPERS, J. MURPHY, R. A. BUCHANAN
 Lattice Vibrations of LaCl_3

"Lattice Dynamics" (ed. by R. F. WALLIS) 109 (1965),
 Pergamon Press.

2.37. Lead Metatitanate

PbTiO_3 -67001

S. P. SOLOVIEV, O. L. KUKHTO, N. A. CHERNOBLEKOV, M. G. ZETLYANOV
 Scattering of Cold Neutrons by Polycrystalline Barium, Strontium and Lead Titanates
Soviet Phys. Solid State, **8**, 2156 (1967)

2.38. Thorium Dioxide

ThO_2 -66001

SAMIR F. BESHAI
 Total Cross Sections of U, UO_2 and ThO_2 for Thermal and Subthermal Neutrons
AE-222 (1966)

2.39. Uranium Dioxide

UO_2 -63001

I. M. THORSON, B. C. HAYWOOD
 Scattering Law for UO_2
ISNSL, Vol. 2, 213 (1963)

UO_2 -65002

G. DOLLING, R. A. COWLEY, A. D. B. WOODS
 The Crystal Dynamics of Uranium Dioxide
Can. J. Phys., **43**, 1397 (1965)

UO_2 -65003

A. D. B. WOODS, G. DOLLING, R. A. COWLEY
 The Crystal Dynamics of Uranium Dioxide
ISN, Vol. 1, 373 (1965)

UO_2 -66004

SAMIR F. BESHAI
 Total Cross Sections of U, UO_2 , ThO_2 for Thermal Neutrons
AE-222 (1966)

UO_2 -66005

C. R. ADKINS, P. J. PERSIANI, R. N. HWANG, J. J. KAGANOVA
 The Chemical Binding Effects on the Resonance Line Shapes of Uranium-238 in a UO_2 Lattice
CONF-660303 (Book. 1), 134 (1966)

UO_2 -67006

F. BISHOFF, W. A. BRYANT, L. J. ESCH, C. LAJEUNESSE, W. E. MOORE, S. S. PAN, S. N. PUROHIT, M. L. YEATER
 Epithermal Neutron Inelastic Scattering
WASH-107, 103 (1967)

UO_2 -68007

S. N. PUROHIT, S. S. PAN, F. BISHOFF, W. A. BRYANT, C. LAJEUNESSE, M. L. YEATER, W. E. MOORE, J. C. KIROUNA, L. J. ESCH, N. C. FRANCIS
 Inelastic Neutron Scattering in Metal Hydrides, UC and UO_2 and Applications of the Scattering Law
Neutron Thermalization and Reactor Spectra, Vol. 1, 407 (1968), IAEA

UO₂-68008

I. M. THORSON

The Scattering Law for Various Reactor Materials
Neutron Thermalization and Reactor Spectra, Vol. 1,
373 (1968), IAEA

UO₂-68009

J. R. BEYSTER, G. M. BORGONOV, T. GOZANI *et al.*
Integral Neutron Thermalization
GA-8449 (1968)

2. 40. Uranium Carbide

UC-67001

S. S. PAN, M. L. YEATER, W. E. MOORE

Recent Low Energy Inelastic Scattering Results for
Metal Hydrides and Uranium Carbide
RPI-328-101 (1967)

UC-68002

S. N. PUROHIT, S. S. PAN, F. BISCHOFF, W. A. BRYANT,
C. LAJEUNESSE, M. L. YEATER, W. E. MOORE, G. J.
KIROUAC, L. J. ESCH, N. C. FRANCIS
Inelastic Neutron Scattering in Metal Hydrides, UC and
UO₂, and Applications of the Scattering Law
Neutron Thermalization and Reactor Spectra, Vol. 1,
407 (1968), IAEA

3 Organic Compounds

3.1. Methylene

CH₂-68001

J. R. BEYSTER, G. M. BORGONOV, G. W. CARRIVEAU
 Angular Scattering by CH₂, ZrH_{1.85}, and C₆H₆
 Neutron Thermalization and Reactor Spectra, Vol. 1,
 493 (1968), IAEA

CH₂-67002

J. R. BEYSTER, G. M. BORGONOV, G. W. CARRIVEAU
 Angular Scattering by CH₂, ZrH_{1.85} and C₆H₆
 GA-8030 (1967)

3.2. Methane

CH₄-49001

E. MELKONIAN
 Slow Neutron Velocity Spectrometer Studies of O₂, N₂,
 Ar, H₂O, and Seven Hydrocarbons
Phys. Rev., **76**, 1750 (1949)

CH₄-51002

A. M. L. MESSIAH
 Scattering of Slow Neutrons by H₂ and CH₄
Phys. Rev., **84**, 204 (1951)

CH₄-52003

N. K. POPE
 The Theory of Neutron Diffraction by Gases-I
Can. J. Phys., **30**, 597 (1952)

CH₄-57004

T. J. KRIEGER, M. S. NELKIN
 Slow-Neutron Scattering by Molecules
Phys. Rev., **106**, 290 (1957)

CH₄-61005

G. W. GRIFFING
 Influence of the Rotational Levels on the Scattering of
 Slow-Neutrons by Gaseous Methane
Phys. Rev., **124**, 1489 (1961)

CH₄-62006

R. M. BRUGGER
 Experimental Information for Thermalization Problems
 BNL-719 (C-32) Vol. 1, RA⁻¹ (1962)

CH₄-62007

H. L. McMURRY, L. J. GANNON, W. A. HESTIR
 Evaluation of Techniques for Computing Differential
 Scattering Cross Section
 BNL-719 (C-32) Vol. 1, 172 (1962)

CH₄-63008

Z. ROGALSKA
 Slow Neutron Scattering by Molecules of Liquid Methane
Physica, **29**, 491 (1963)

CH₄-63009

J. A. JANIK, J. JANIK, F. MANIAWSKI, H. RZANY, Z.
 ROGALSKA, J. SCIESINSKI, U. SAGAN, N. TUBBS
 Systematic Study of Total Neutron Scattering Cross
 Sections of Hydrogen Containing Molecules
 ISNSL, Vol. 1, 405 (1963)

CH₄-63010

S. HAUTECLER, H. STILLER
 Molecular Motions in Liquid Methane
 ISNSL, Vol. 1, 423 (1963)

CH₄-63011

G. W. GRIFFING
 Scattering of Slow Neutrons by Gaseous Methane
 ISNSL, Vol. 1, 435 (1963)

CH₄-63012

F. J. WEBB
 The Inelastic Scattering of Cold Neutrons by Methane,
 Ammonia and Hydrogen
 ISNSL, Vol. 1, 457 (1963)

CH₄-63013

H. STILLER, S. HAUTECLER
 Energy Distribution of Neutrons Scattered from Solid
 Methane
 ISNSL, Vol. 2, 281 (1963)

CH₄-64014

R. M. BRUGGER, V. S. RAINES, H. C. McMURRY
 Scattering of Slow Neutrons from Methane Gas
Phys. Rev., **136**, A 106 (1964)

CH₄-64015

W. L. WHITTEMORE
 Inelastic Neutron Scattering in Liquid Methane and
 Liquid Parahydrogen
Nuclear Sci. and Eng., **18**, 182 (1964)

CH₄-64016

K. OTNES, J. MELLOR, H. PALEVSKY
 Spectra of Scattered Cold Neutrons from Gaseous, Liquid
 and Solid Methane
Bull. Amer. Phys. Soc., **9**, 421 (1964)

CH₄-65017

L. G. GANNON, H. L. McMURRY
 A Machine Program for Calculating Slow Neutron
 Scattering Cross Section with Exact Averaging over
 Molecular Orientation
 IDO-17087 (1965)

CH₄-65018

B. DORNER, H. STILLER
 Lattice Dynamics of Solid Methane
 ISN, Vol. 2, 291 (1965)

- CH₄-65019**
- B. A. DASANNACHARYA, G. VENKATARAMAN, K. USHA DENIZ
Cold Neutron Scattering by Methane
ISN, Vol. 2, 157 (1965)
- CH₄-65020**
- J. A. JANIK
Molecular Dynamics Investigated by Neutron Scattering
ISN, Vol. 2, 243 (1965)
- CH₄-65021**
- W. L. WHITTEMORE
Differential Neutron Thermalization
GA-6583 (1965)
- CH₄-66022**
- R. E. WEST, R. M. BRUGGER, G. W. GRIFFING
Coherent Scattering from CD₄ Gas
WASH-1068 (EANDC (US) 85U) 171 (1966)
- CH₄-66023**
- Y. D. HARKER
Solid Methane
WASH-1068 (EANDC (US) 85U) 171 (1966)
- CH₄-66024**
- G. KOSALY, G. SOLT
Slow Neutron Scattering by Solid CH₄ and NH₄I
Physica, 32, 1571 (1966)
- CH₄-66025**
- R. E. WERT, R. M. BRUGGER, G. W. GRIFFING
Intermolecular Coherent Scattering of Neutrons by CD₄ Gas
Phys. Rev., 148, 163 (1966)
- CH₄-66026**
- R. M. BRUGGER
Interpretation of Scattering-Law Data
Reactor Physics in the Resonance and Thermal Regions
Vol. 1, 91 (1966), M. I. T. Press
- CH₄-67027**
- B. A. DASANNACHARYA, G. VENKATARAMAN
Dynamics of Liquid CH₄ from Cold-Neutron Scattering
Phys. Rev., 156, 43 (1967)
- CH₄-67028**
- F. J. WEBB
The Inelastic Scattering of Cold Neutrons by Methane and Ammonia
Proc. Phys. Soc. (London), 92, 912 (1967)
- CH₄-67029**
- G. SOLT
Slow Neutron Scattering by Solid Methane
Physica, 37, 253 (1967)
- CH₄-68030**
- ASHOK K. AGKAWAL, S. YIP
Rotational Correlation Functions in Neutron Scattering by Molecular Gases
Phys. Rev., 171, 263 (1968)
- CH₄-68031**
- A. BAJOREK, I. NATKANIEC, K. PARLINSKI, M. S. HRYNKIEWICZ, J. A. JANIK, J. M. JANIK, K. OTNES, E. TUNKELO
Molecular Dynamics in Gaseous and Solid Methane Studied by the Inelastic Neutron Scattering Method
INP-608/PS (1968)
- CH₄-68032**
- J. A. JANIK
Molecular Dynamics Studied by Neutron Inelastic Scattering and Computing Method
INP-600/PS (1968)
- CH₄-68033**
- K. SKÖLD
Effects of Molecular Reorientation in Solid Methane on the Quasielastic Scattering of Thermal Neutron
J. Chem. Phys., 49, 2443 (1968)
- 3.3. Ethane**
- C₂H₆-65001**
- L. J. GANNON, H. L. McMURRY
A Machine Program for Calculating Slow Neutron Scattering Cross Sections with Exact Averaging over Molecular Orientation
IDO-17087 (1965)
- C₂H₆-66002**
- R. M. BRUGGER
Interpretation of Scattering-Law Data
Reactor Physics in the Resonance and Thermal Regions,
Vol. 1, 91 (1966), M. I. T. Press
- C₂H₆-67003**
- K. A. SERONG, R. M. BRUGGER
Measurements of the Frequency of Torsional Vibration in the Ethane Molecule
J. Chem. Phys., 42, 421 (1967)
- 3.4. Propane**
- C₃H₈-62001**
- K. A. STRONG, G. D. MARSHALL, R. M. BRUGGER, P. D. RANDOLPH
Scattering of Slow Neutrons from Propane Gas
Phys. Rev., 125, 933 (1962)
- C₃H₈-62002**
- R. M. BRUGGER
Experimental Information for Thermalization Problems
BNL-719, (C-32) Vol. 1, RA⁻¹ (1962)
- C₃H₈-62003**
- H. L. McMURRY, L. J. GANNON, W. A. HESTIR
Evaluation of Techniques for Computing Differential Scattering Cross Section
BNL-719 (C-32) Vol. 1, 172 (1962)
- 3.5. Pentane**
- C₅H₁₂-59001**
- D. W. McCALL, D. C. DOUGLASS, E. W. ANDERSON

- C₆H₆-65007**
- V. V. GOLIKOV, I. ZHUKOVSKAJA, F. L. SHAPIRO, A. SHKATULA, E. JANIK
Slow Neutron Scattering in Water and Some Organic Substances
ISN, Vol. 2, 201 (1965)
- C₆H₆-65008**
- M. G. ZEMLJANOV, U. A. CHERNDLEKOV, J. L. SHITIKOV
Cold Neutron Scattering by Polyphenyls
ISN, Vol. 2, 221 (1965)
- C₆H₆-65009**
- W. GLÄSER, G. EHRET, A. MERKEL
Recent Measurements of the Scattering Laws of Some Hydrogenous Moderators
ISN, Vol. 2, 167 (1965)
- C₆H₆-66010**
- U. SCHMIAT, M. SAAD
Use of Totally Reflected Cold Neutrons for Measurement of the Temperature Dependence of the (n, p) Cross Section for Chemically Bound Protons
EANDC (E) 66 "U" (1966)
- C₆H₆-66011**
- V. C. BOFFI, B. MARSICO, V. G. MOLINARI, R. SCOZZAFAVA
Neutron Diffusion Parameters in Benzene
Nuclear Sci. and Eng., 20, 236 (1966)
- C₆H₆-67012**
- A. ROGER GEE, G. WILSE ROBINSON
Raman Spectrum of Crystalline Benzene
J. Chem. Phys., 46, 4847 (1967)
- C₆H₆-67013**
- J. M. NEILL
Total Cross Sections of Reactor Moderator
WASH-1079 (1967)
- C₆H₆-68014**
- D. SPREVAK, J. U. KOPPEL, J. A. YOUNG
Slow Neutron Scattering and Thermalization by Benzene
Neutron Thermalization and Reactor Spectra, Vol. 1, 437 (1968), IAEA
- C₆H₆-68015**
- R. S. MARSDEN, H. L. McMURRY
Calculated Scattering Law and Thermal Neutron Spectra for Benzene
Neutron Thermalization and Reactor Spectra, Vol. 1, 457 (1968), IAEA
- C₆H₆-68016**
- V. ARDENTS, R. CUNIBERTI, A. KIND, G. ROSSI
Molecular Model for Polypheyls and its Use in Calculating Reactor Parameters
Neutron Thermalization and Reactor Spectra, Vol. 1, 467 (1968), IAEA
- C₆H₆-68017**
- J. R. BEYSTER, G. M. BOROGONOV, G. W. CARRIVEAU
Angular Scattering by CH₂, ZrH_{1.85}, and C₆H₆
Neutron Thermalization and Reactor Spectra, Vol. 1, 493 (1968), IAEA
- C₆H₆-65001**
- K. E. LARSSON, U. DAHLBORG
Proton Motions in Some Hydrogenous Liquids Studied by Cold Neutron Scattering
Physica, 30, 1561 (1964)
- C₆H₆-66003**
- K. E. LARSSON, L. Q. AMARAL, N. IVANCHEV, S. RIPEAN, L. BERGSTEDT, U. DAHLBORG
Proton Motions in Complex Hydrogenous Liquids-II, Results Gained from Some Neutron-Scattering Experiments, Phys. Rev., 151, 126 (1966)
- C₆H₆-67004**
- K. SKÖLD, L. KARLEN, J. SCIESINSKI
A Specimen Container for Inelastic Neutron Scattering Studies of Liquids at High Pressures
Nucl. Instr. and Methods, 56, 305 (1967)
- C₆H₆-65005**
- V. V. GOLIKOV, I. ZHOKOVSKJA, F. L. SHAPIRO, A. SHKATULA, E. JANIK
Slow Neutron Scattering in Water and Some Organic Substances
ISN, Vol. 2, 201 (1965)
- C₆H₆-61001**
- R. M. BRUGGER
Slow Neutron Inelastic Scattering Measurements at MTR ISNSL, 277 (1961)
- C₆H₆-61002**
- K. HEINLOTH
Scattering of Subthermal Neutrons on H₂O, CH₂O and C₆H₆
Z. Physik, 163, 218 (1961)
- C₆H₆-62003**
- V. C. BOFFI, V. C. MOLINARI, D. E. PARKS
Slow Neutron Scattering and Thermalization by Benzene and Other Polyphenyls
BNL-719 (C-32), Vol. 1, 69 (1962)
- C₆H₆-63004**
- V. C. BOFFI, V. G. MOLINARI, D. E. PARKS
Slow Neutron Scattering by Benzen
ISNSL, Vol. 1, 285 (1963)
- C₆H₆-65005**
- W. GLÄSER, G. EHRET, A. MERKEL
Recent Measurements of the Scattering Laws of Some Hydrogenous Moderators
ISN, Vol. 2, 167 (1965)
- C₆H₆-65006**
- W. GLÄSER
Determination of the Scattering Laws of Some Organic Substances with Slow Neutrons
Nukleonik, 7, 64 (1965)

C₆H₆-68018

D. K. Ross, F. P. SZABO, Y. SNALAN

The Inelastic Scattering of Neutrons from Benzene and Water

Neutron Thermalization and Reactor Spectra, Vol. 1, 477 (1968), IAEA

C₆H₆-68019

A. H. NARTEN

Diffraction Pattern and Structure of Liquid Benzene

J. Chem. Phys., **48**, 1630 (1968)

C₆H₆-68020

D. SPREVAL, G. M. BORGONOV, J. M. NEILL, G. W. CARRIVEAN

Neutron Thermalization in Benzene

Nukleonik, **11**, 233 (1968)

3.7. Cyclohexane**C₆H₁₂-65001**

C. H. HOFMEYER

Determination of the Diffusion Constants $D(E_0, T)$ and $Dv(T)$ of Thermal Neutrons in H₂O, Phenylene, ZrH_{1.95} and D₂O by Measurement of Scattering Angular Distributions ($4\pi/a$) ($d\sigma/d\Omega$)•III. Benzene, Diphenyl, o-, m-, p- Terphenyl

Nukleonik, **7**, 286 (1965)

C₆H₁₂-66002

U. SCHMIAT, M. SAAD

Use of Totally Reflected Cold Neutrons for Measurement of the Temperature Dependence of the (n, p) Cross Section for Chemically Bound Protons

EANDC (E) 66 "U" (1966)

3.8. Adamantane**C₁₀H₁₆-67001**

R. STOCKMEYER, H. H. STILLER

Lattice Dynamics of Solid Adamantane

JUL-478-NP, also *Phys. Stat. Sol.*, **19**, 781 (1967)

C₁₀H₁₆-68002

S. H. CHEN, V. DVORAK

Group-Theoretical Analysis of Lattice Vibrations in Molecular Crystal

J. Chem. Phys., **48**, 4060 (1968)

3.9. Biphenyl**C₁₂H₁₀-64001**

T. SPRINGER, C. HOFMEYER, S. KORNBIHLER, H. D. LEMMEL
On the Determination of the Diffusion Constants of H₂O
Polyphenyls, ZrH_{1.92}, and D₂O by Neutron Single-Scattering Experiment

PICG, Vol. 2, 351 (1965)

C₁₂H₁₀-65002

W. GLÄSER

Determination of the Scattering Laws of Some Organic Substances with Slow Neutrons

Nukleonik, **7**, 64 (1965)

C₁₂H₁₀-65003

C. H. HOFMEYER

Determination of the Diffusion Constants $D(E_0, T)$ and $Dv(T)$ of Thermal Neutrons in H₂O, Phenylene, ZrH_{1.92}, and D₂O by Measurement of Scattering Angular Distributions ($4\pi/a$) ($d\sigma/d\Omega$)•III. Benzene, Diphenyl, o-, m-, p- Terphenyl

Nukleonik, **7**, 286 (1965)

C₁₂H₁₀-66004

U. SCHMIAT, M. SAAD

Use of Totally Reflected Cold Neutrons for Measurement of the Temperature Dependence of the (n, p) Cross Section for Chemically Bound Protons

EANDC (E) 66 "U" (1966)

C₁₂H₁₀-67005

J. M. NEILL, H. ANTUNEZ, D. SPREVAL

Neutron Thermalization in Diphenyl

GA-8050 (1967)

C₁₂H₁₀-68006

J. R. BEYSTER, G. M. BORGONOV, T. GOZANI *et al.*

Integral Neutron Thermalization

GA-8449 (1968)

C₁₂H₁₀-68007

V. ARDENTE, R. CUNIBERTI, A. KIND, G. ROSSI

Molecular Model for Polyphenyls and its Use in Calculating Reactor Parameters

Neutron Thermalization and Reactor Spectra, Vol. 1, 467 (1968), IAEA

3.10. Hexamethylbenzene**C₁₂H₁₈-66001**

J. J. RUSH

Neutron-Scattering Study of Hindered Rotational Motions and Phase Transitions in Hexamethylbenzene

Phys. Rev., **44**, 2749 (1966)

C₁₂H₁₈-67002

J. J. RUSH

Neutron-Scattering Study of Hindered Rotations in Methylbenzene

J. Chem. Phys., **47**, 3936 (1967)

3.11. Terphenyl**C₁₈H₁₄-62001**

R. M. BRUGGER

Scattering of Slow Neutrons by Solid and Liquid Terphenyls

Phys. Rev., **126**, 29 (1962)

C₁₈H₁₄-62002

V. C. BOFFI, V. C. MOLINARI, D. E. PARKS

Slow Neutron Scattering and Thermalization by Benzene and Other Polyphenyls

BNL-719 (C-32) Vol. 1, 69 (1962)

C₁₈H₁₄-65003

C. H. HOFMEYER

Determination of the Diffusion Constants $D(E_0, T)$ and

$\bar{D}\bar{v}(T)$ of Thermal Neutrons in H_2O , Phenylene, $ZrH_{1.92}$, and D_2O by Measurement of Scattering Angular Distribution ($4\pi/\sigma$) ($d\sigma/d\Omega$). III. Benzene, Diphenyl, o-, m-, p-Terphenyl
Nukleonik, 7, 286 (1965)

$C_{18}H_{14}$ -66004

U. SCHMIAT, M. SAAD

Use of Totally Reflected Cold Neutron for Measurement of the Temperature Dependence of the (n, p) Cross Section for Chemically Bound Protons
 EANDC (E) 66 "U" (1966)

ESCI

3.12. Polymethylene

C_nH_{2n} -67001

R. F. SCHAUFELD, T. SHIMANOUCHI

Longitudinal Acoustical Vibrations of Finite Polymethylene Chains

J. Chem. Phys., 47, 3605 (1967)

3.13. Hexamethylenetetramine

$C_6H_{12}N_4$ -68001

S. H. CHEN, V. DROVAK

Group-Theoretical Analysis of Lattice Vibrations in Molecular Crystals

J. Chem. Phys., 48, 4060 (1968)

3.14. Formic Acid

CH_2O_2 -61001

K. HEINLOTH

Scattering of Subthermal Neutrons on H_2O , CH_2O_2 and C_6H_6

Z. Physik, 163, 218 (1961)

3.15. Acetic Acid

$C_2H_4O_2$ -65001

V. V. GOLIKOV, I. ZHOKORSKJA, F. L. SHAPIRO, A. SH-KATULA, E. JANIK

Slow Neutron Scattering in Water and Some Organic Substances

ISN, Vol. 2, 201 (1965)

3.16. Ethylene Glycol

$C_2H_6O_2$ -65001

V. V. GOLIKOV, I. ZHOKOVSKJA, F. L. SHAPIRO, A. SH-KATULA, E. JANIK

Slow Neutron Scattering in Water and Some Organic Substances

ISN, Vol. 2, 201 (1965)

3.17. Glycerol

$C_3H_8O_3$ -62001

K. E. LARSSON, K. S. SINGWI

Cold Neutron Scattering and Diffusive Motions in Hydrogen Bond Liquids

Phys. Letters, 3, 145 (1962)

$C_3H_8O_3$ -63002

K. E. LARSSON, U. DAHLBORG

A Study of the Diffusive Atomic Motions in Glycerol and of the Vibratory Motions in Glycerol and Light and Heavy Water by Cold Neutron Scattering
 ISNSL, Vol. 1, 317 (1963)

$C_3H_8O_3$ -64003

K. E. LARSSON, U. DAHLBORG

Proton Motions in Some Hydrogenous Liquids Studied by Cold Neutron Scattering
Physica, 30, 1561 (1964)

3.18. Methyl Iodide

CH_3I -66001

A. BAJOREK, J. A. JANIK, J. M. JANIK, K. PARLINSKI

M. SUKNIK-HRYNKIEWICZ

Molecular Dynamics Study by the Neutron Inelastic Scattering Method-II. Methyl Iodide
 JINR E 3-3057 (1966)

CH_3I -68002

J. A. JANIK

Molecular Dynamics Studies by Neutron Inelastic Scattering and Computing Method
 INP-600/PS (1968)

3.19. Biphyde

BPHYL-65001

W. GLÄSER

Determination of the Scattering Laws of Some Organic Substances with Slow Neutrons

Nukleonik, 7, 64 (1965)

3.20. Polyethylene

PLYETH-58001

A. W. McREYNOLDS, M. S. NELKIN, M. N. ROSENBLUTH,

W. L. WHITTEMORE

Neutron Thermalization Chemically-bound Hydrogen and Carbon
 PICG, Vol. 16, 297 (1958)

PLYETH-62002

T. P. LIN, J. L. KOENIG

A Method for the Complete Vibrational Analysis of the Isolated Polyethylene Chain

J. Mol. Spectroscopy, 9, 228 (1962)

PLYETH-62003

M. TASUMI, T. SHIMANOUCHI, T. MIYAZAWA

Normal Vibrations and Force Constants of Polymethylene Chain
J. Mol. Spectroscopy, 9, 261 (1962)

PLYETH-62004

D. T. GOLDMAN, F. D. FEDERIGHI

Calculation of Thermal Neutron Flux Spectra in an Infinite Polyethylene Moderated Medium with Varying Amounts of Absorption

BNL-719 (C-32) Vol. 1, 100 (1962)

PLYETH-62005

M. G. ZEMYANOV, N. A. CHERNOPLEKOV
Investigation of Inelastic Scattering of Cold Neutrons by Certain Hydrogen-Containing Substances

BNL-719 (C-32) Vol. 1, 66 (1962)

PLYETH-63006

D. T. GOLDMAN, F. D. FEDERIGHI
Calculation of the Inelastic Scattering of Neutrons from Polyethylene and Water

ISNSL, Vol. 1, 389 (1963)

PLYETH-63007

D. T. GOLDMAN, F. D. FEDERIGHI
Calculation of Thermal Neutron Flux Spectra in a Polyethylene Moderated Medium

Nuclear Sci. and Eng., 16, 165 (1963)

PLYETH-63008

C. W. LINDENMEIER, O. O. MATSUMOTO, D. R. SKEEN
Program KERNEL

HW-78288 (1963)

PLYETH-64009

H. R. DANNER, G. J. SAFFORD, H. BOUTIN, M. BERGER
Study of Low-Frequency Motions in Polyethylene and the Paraffin Hydrocarbons by Neutron Inelastic Scattering

J. Chem. Phys., 40, 1417 (1964)

PLYETH-65010

S. B. ARMSTRONG
The Energy-Dependent Total Neutron Cross Section of Polyethylene

Nuclear Sci. and Eng., 23, 192 (1965)

PLYETH-65011

W. MYERS, J. L. DONOVAN, J. S. KING
Polyethylene Frequency Spectrum from "Warm"-Neutron Scattering

J. Chem. Phys., 42, 4299 (1965)

PLYETH-65012

H. BOUTIN, H. PRASK, S. F. TREVINO, H. DANNER
Study of the Low-Frequency Molecular Motions in Polyethylene and the n-Paraffins by Slow Neutron Inelastic Scattering

ISN, Vol. 2, 407 (1965)

PLYETH-65013

W. L. WHITTEMORE
Differential Neutron Thermalization

GA-6583 (1965)

PLYETH-65014

J. A. YOUNG, J. U. KOPPEL
Calculation of Thermal Scattering Kernels

GA-6281 (1965)

PLYETH-66015

G. J. KIROUAC, W. E. MOORE, K. W. SEEMANN, M. L. YEATER
Polyethylene Double Differential Inelastic Scattering Cross Sections for Epithermal Neutrons

CONF-660303 (Book 1.) 122 (1966)

PLYETH-66016

G. J. KIROUAC, W. E. MOORE, K. W. SEEMANN
Inelastic Scattering Cross Sections for Polyethylene and Water in the Gas Transition Region

Nuclear Sci. and Eng., 25, 300 (1966)

PLYETH-66017

J. U. KOPPEL
Neutron Scattering by Hydrogenous Moderators

GA-7055 (1966)

PLYETH-66018

W. L. WHITTEMORE
Scattering of Neutrons by Polyethylene

GA-6456 (1966) and *Nuclear Sci. and Eng.*, 24, 394 (1966)

PLYETH-66019

J. R. BEYSTER, et al.
Integral Neutron Thermalization

GA-6096 (1966)

PLYETH-66020

J. U. KOPPEL
Neutron Scattering by Hydrogenous Moderators

GA-7055 (1966)

PLYETH-66021

W. MYERS, G. C. SUMMERFIELD, J. S. KING
Neutron Scattering in Stretch-Oriented Polyethylene

J. Chem. Phys., 44, 184 (1966)

PLYETH-66022

G. J. SAFFORD, A. W. HAUMANN, F. T. SIMON
Neutron-Scattering Study of the Intramolecular and Crystalline Modes of Polyethylene

J. Chem. Phys., 45, 3787 (1966)

PLYETH-66023

JUAN U. KOPPEL
Neutron Scattering by Hydrogenous Moderators
Reactor Physics in the Resonance and Thermal Regions.

Vol. 1, 3 (1966), M. I. T. Press

PLYETH-67024

M. TASUMI, S. KRIMM
Crystal Vibration of Polyethylene

J. Chem. Phys., 46, 755 (1967)

PLYETH-67025

J. E. TUCKER, W. REESE
Heat Capacity of Polyethylene from 25° to 30°K

J. Chem. Phys., 46, 1338 (1967)

PLYETH-67026

F. BISCHOFF, W. A. BRYANT, L. J. ESCH, C. LAJEUNESSE, W. E. MOORE, S. S. PAN, S. N. PUROHIT, M. L. YEATER
Epithermal Neutron Inelastic Scattering

WASH-1074 103 (1967)

PLYETH-67027

W. E. MOORE, G. J. KIROUAC, L. J. EASCH, K. W. SEEMANN, M. L. YEATER
Epithermal Neutron Inelastic Scattering by Polyethylene

RPI-328-108 (1967)

PLYETH-68028

M. I. BANK, S. KRIMM
Lattice-Frequency Studies of Crystalline and Fold Structure in Polyethylene:
J. Chem. Phys., **39**, 4951 (1968)

PLYETH-68029

J. E. LYNCH, Jr., G. C. SUMMERFIELD, L. A. FELDKAMP,
J. S. KING
Neutron Scattering in normal and Deuterated Polyethylene
J. Chem. Phys., **48**, 912 (1968)

PLYETH-68030

W. R. MYERS, P. D. RANDOLPH
Low-Frequency Vibrations in Polyethylene
J. Chem. Phys., **49**, 1043 (1968)

PLYETH-68031

W. R. MYERS
Neutron Scattering in Oriented Polyethylene at 300, 77,
and 4.2°K.
IN-1151 (1968)

3.21. Paraffine

PARFN-61001

R. M. BRUGGER
Slow Neutron Inelastic Scattering Measurements at MTR
ISNSL, 277 (1961)

PARFN-65002

H. BOUTIN, H. PRASK, S. F. TREVINO, H. DANNER
Study of the Low-Frequency Molecular Motions in Polyethylene and the n-Paraffins by Slow Neutron Inelastic Scattering
ISN, Vol. 2, 407 (1965)

3.22. Alcohol

ALCHL-61001

R. M. BRUGGER
Slow Neutron Inelastic Scattering Measurements at MTR
ISNSL, 277 (1961)

ALCHL-66002

K. E. LARSSON, L. Q. AMARAL, N. IVANCHEV, S. RIPEANU,
L. BERGSTEDT, U. DAHLBORG
Proton Motions in Complex Hydrogenous Liquids-II.
Results Gained from Some Neutron-Scattering Experiments
Phys. Rev., **151**, 126 (1966)

ALCHL-67003

S. RIPEANU, N. ILESCU
Quasi Elastic Scattering of Slow Neutron in Pentanol
Phys. Letters, **26 A**, 72 (1967)

3.23. Other Organic Compounds

ORG-64001

K. E. LARSSON, U. DAHLBORG
Proton Motions in Some Hydrogenous Liquids Studied
by Cold Neutron Scattering
Physica, **30**, 1561 (1964)

ORG-65002

B. U. MOCMOBOU, B. C. DUKAPEB *et al.*
Experimental Studies of Neutron Thermalization
PICG, Vol. 2, 351 (1965)

ORG-66003

A. GRAFFSTEIN, T. RZESSOT, E. WARD
The Neutron Diffusion Parameters of Epoxyresin
INR-731-IXA-R. (1966)

4 Monatomic Elements

4.1. Hydrogen

H-37001

J. SCHWINGER, E. TELLER

The Scattering of Neutrons by Ortho-and Parahydrogen
Phys. Rev., **52**, 286 (1937)

H-47002

M. HAMMERMEYER, J. SCHWINGER

Neutron Scattering in Ortho-and Parahydrogen
Phys. Rev., **71**, 678 (1947)

H-51003

A. M. L. MESSIAH

Scattering of Slow Neutrons by H_2 and CH_4
Phys. Rev., **84**, 204 (1951)

H-57004

T. J. KRIEGER, M. S. NELKIN

Slow-Neutron Scattering by Molecules
Phys. Rev., **106**, 290 (1957)

H-58005

STIG BRUMBERG

On the Scattering of Slow Neutrons by Hydrogen
Molecules

PICG Vol. 15, 79 (1958)

H-61006

G. SARMA

Scattering of Slow Neutrons by Liquid Hydrogen
ISNSL, 397 (1961)

H-63007

A. W. McREYNOLDS, W. L. WHITTEMORE

Dynamics of Liquid Hydrogen by Neutron Scattering
ISNSL, Vol. 1, 263 (1963)

H-63008

W. L. WHITTEMORE, H. R. DANNER

Neutron Interactions in Liquid Para-and Ortho-Hydrogen
ISNSL, Vol. 1, 273 (1963)

H-64009

W. L. WHITTEMORE

Inelastic Neutron Scattering in Liquid Methane and
Liquid Parahydrogen*Nuclear Sci. and Eng.*, **18**, 182 (1964)

H-64010

P. A. EGELSTAFF, B. C. HAYWOOD, F. J. WOODS, A. H.
BASTONMolecular Motions in Liquid and Solid Ortho-Hydrogen
Phys. Letters, **12**, 188 (1964)

H-64011

J. A. YOUNG, J. U. KOPPEL

Slow Neutron Scattering by Molecular Hydrogen and
Deuterium*Phys. Rev.*, **135**, A 603 (1964)

H-65012

A. HORSLEY

Neutron Cross Sections of the Proton in the Energy
Range 0.0001 eV-20. MeV
AERE 0-23/65 (1965)

H-65013

J. A. YOUNG, J. U. KOPPEL

Calculation of Thermal Scattering Kernels
GA-6281 (1965)

H-65014

Y. D. NALIBOFF

LHK-An IBM 7044 Program to Calculate Cross Sections
and Kernels for Liquid Para- and Ortho-Hydrogen
GA-5652 (1965)

H-66015

J. U. KOPPEL, J. A. YOUNG

Slow Neutron Spectra in Molecular Hydrogen at Low
Temperature*Nukleonik*, **8**, 40 (1966)

H-66016

JUAN U. KOPPEL

Neutron Scattering by Hydrogeneous Moderators

Reactor Physics in the Resonance and Thermal Regions,
Vol. 1, 3 (1966) M. I. T. Press

H-67017

R. J. ELLIOTT, W. M. HARTMANN

Theory of Neutron Scattering from Liquid and Solid
Hydrogen*Proc. Phys. Soc.*, **90**, 671 (1967)

H-67018

P. A. EGELSTAFF, B. C. HAYWOOD, F. J. WEBB

Molecular Motions in Liquid and Solid Hydrogen and
Deuterium*Proc. Phys. Soc.*, **90**, 681 (1967)

H-67019

W. L. WHITTEMORE

Differential Neutron Thermalization (Annual Summary
Report)

GA-7439 (TID-4500), (1967)

4.2. Deuterium

D-64001

J. A. YOUNG, J. U. KOPPEL

Slow Neutron Scattering by Molecular Hydrogen and
Deuterium*Phys. Rev.*, **135**, A 603 (1964)

D-65002

J. A. YOUNG, J. U. KOPPEL

Calculation of Thermal Scattering Kernels
GA-6281 (1965)

D-67003

P. A. EGELSTAFF, B. C. HAYWOOD, F. J. WEBB
Molecular Motions in Liquid and Solid Hydrogen and
Deuterium
Proc. Phys. Soc., **90**, 681 (1967)

D-68004

S. J. TALHOUK, P. M. HARRIS, D. WHITE, R. A. ERICKSON
Scattering of Thermal Neutrons by Liquid Solutions of
Ortho and Para-deuterium
J. Chem. Phys., **48**, 1273 (1968)

4.3. Helium

He-57001

H. PALEVSKY, K. OTNES, K. E. LARSSON, R. PAULI,
R. STEDMAN
Excitation of Rotons in Helium II by Cold Neutrons
Phys. Rev., **108**, 1346 (1957)

He-57002

M. COHEN, R. P. FEYNMAN
Theory of Inelastic Scattering of Cold Neutrons from
Liquid Helium
Phys. Rev., **107**, 13 (1957)

He-58003

H. PALEVSKY, K. OTNES, K. E. LARSSON
Excitation of Rotons in Helium II by Cold Neutrons
Phys. Rev., **112**, 11 (1958)

He-58004

J. L. YARNELL, G. P. ARNOLD, P. J. BENDT, E. C. KERR
Energy vs Momentum Relation for the Excitations in
Liquid Helium
Phys. Rev. Letters, **1**, 9 (1958)

He-58005

D. G. HENSHAW
Energy-Momentum Relation in Liquid Helium by
Inelastic Scattering of Neutrons
Phys. Rev. Letters, **1**, 127 (1958)

He-59006

J. L. YARNELL, G. P. ARNOLD, P. J. BENDT, E. C. KERR
Excitations in Liquid Helium: Neutron Scattering
Measurements
Phys. Rev., **113**, 1379 (1959)

He-61007

D. G. HENSHAW, A. D. B. WOODS
Modes of Atomic Motions in Liquid Helium by Inelastic
Scattering of Neutrons
Phys. Rev., **121**, 1266 (1961)

He-61008

H. PALEVSKY
Cold-Neutron Scattering Experiments with Liquid Helium
ISNSL, 223, (1961)

He-63009

B. N. BROCKHOUSE, J. BERGSMA, B. A. DASANNACHARYA,

N. K. POPE

Liquid Dynamics from Neutron Spectrometry
ISNSL, Vol. 1, 189 (1963)

He-65010

A. D. B. Woods

Liquid Helium Dispersion Curve at Large Momentum
ISN, Vol. 2, 191 (1965)

He-67011

T. R. KOEHLER

New Approach to Lattice Dynamics applied to Solid
 ^3He at 0°K

Phys. Rev. Letters, **18**, 654 (1967)

He-67012

F. W. DEWETTE, L. H. NOSANOW, N. R. WERTHAMER
Calculation of Phonon Frequencies and Thermodynamic
Properties of Crystalline bcc Helium
Phys. Rev., **162**, 824 (1967)

He-67013

J. R. PLUMMER, G. C. SUMMERFIELD, P. F. ZWEIFEL
Quantum Statistics and Slow Neutron Scattering by Gases
J. Chem. Phys., **47**, 4923 (1967)

He-67014

G. L. MORLEY

Lattice Dynamics of Solid Helium
IS-T-206 (1967)

He-67015

F. P. LIPSCHULTZ, V. J. MINKIEWICZ, T. A. KITCHENS,
G. SHIRANE, R. NATHANS
Phonon Dispersion Measurements on A hcp ^4He Single
crystal at 27 atm
Phys. Rev. Letters, **19**, 1307 (1967)

He-67016

T. A. KITCHENS, V. J. MINKIEWICZ, F. P. LIPSCHULTZ,
G. SHIRANE, R. NATHANS
The Phonon Dispersion Relation for HCP He-4 with
A Molar Volume of 21.1 cm^{-3}
BNL-12596 (1967)

He-68017

V. J. MINKIEWICZ, T. A. KITCHENS, F. P. LIPSCHULTZ,
R. NATHANS, G. SHIRANE
Phonon Spectrum of hcp ^4He
Phys. Rev., **174**, 267 (1968)

He-68018

R. A. COWLEY, A. D. B. WOODS
Neutron Scattering from Liquid Helium at High Energies
Phys. Rev. Letters, **21**, 787 (1968)

He-68019

S. ECKSTEIN, B. B. VARGA
Dispersion of Phonons in ^4He
Phys. Rev. Letters, **21**, 1311 (1968)

4.4. Lithium

Li-65001

K. KREBS

- Dipersion Curves and Lattice Frequency Distribution of Metals
Phys. Rev., **138**, A 143 (1965)
- 4. 5. Beryllium**
- Be-55001
 B. JACROT, F. NETTER, M. GALULA
 Time-of-Flight Spectrometry Equipment for Slow Neutrons in Use at the Saclay Reactor—Its Application to a Study of the Inelastic Scattering of Cold Neutrons
 PICG, Vol. 5, 77 (1955)
- Be-62002
 R. E. SCHMUNK, R. M. BRUGGER, P. D. RANDOLPH,
 K. A. STRONG
 Lattice Dynamics of Beryllium
Phys. Rev., **128**, 562 (1962)
- Be-63003
 R. N. SINCLAIR
 The Neutron Scattering Law and the Frequency Distribution of the Normal Modes of Beryllium and Beryllium Oxide
 ISNSL, Vol. 2, 199 (1963)
- Be-64004
 J. A. YOUNG, J. U. KOPPEL
 Lattice Vibrational Spectra of Beryllium, Magnesium and Zinc
Phys. Rev., **134**, 1476 (1964)
- Be-64005
 B. C. HAYWOOD, R. N. SINCLAIR
 A Compilation of the Scattering Law for Graphite, Beryllium, and Beryllium Oxide at 22°C
 AERE-R 4732 (1964)
- Be-64006
 R. E. SCHMUNK
 Slow Neutron Inelastic Scattering from Beryllium Powder
Phys. Rev., **136**, A 1303 (1964)
- Be-64007
 R. R. FULLWOOD, E. R. CAERTTNER, R. E. SLOVACEK
 The Effects of Coherent Scattering on the Thermalization of Neutrons in Beryllium
 RPI-328-22 (1964)
- Be-64008
 Y. D. NALIBOFF, J. U. KOPPEL
 HEXSCAT Coherent Elastic Scattering of Neutrons by Hexagonal Lattice
 GA-6026 (1964)
- Be-65009
 J. R. BEYSTER, *et al.*
 Integral Neutron Thermalization
 GA-6096 (1965)
- Be-65010
 J. A. YOUNG, J. U. KOPPEL
 Calculation of Thermal Scattering Kernels
 GA-6281 (1965)
- Be-65011
 R. E. SCHMUNK, R. M. BRUGGER, P. D. RANDOLPH
 Interference Effects in Slow Neutron Inelastic Scattering from Polycrystalline Solids
 ISN, Vol. 1, 379 (1965)
- Be-65012
 R. E. DE WAMES, T. WOLFRAM, G. W. LEHMAN
 Lattice Dynamics, Heat Capacities, and Debye-Waller for Be and Zn Using a Modified Axially Symmetric Model
Phys. Rev., **138**, A 717 (1965)
- Be-65013
 R. E. SCHMUNK, B. M. BRUGGER, P. D. RANDOLPH
 Interference Effects in Slow Neutron Inelastic Scattering from Polycrystalline Solids
 ISN, Vol. 1, 379 (1965)
- Be-66014
 R. E. SCHMUNK
 Be Dispersion Relations
 WASH-1068 (EANDC (US) 85 U) 164 (1966)
- Be-66015
 V. C. SAHM, G. VENKATARAMAN, A. P. ROY
 Phonon Dispersion Relations in Beryllium Using the Psuedo Potential Approach
Phys. Letters, **23**, 633 (1966)
- Be-66016
 GUENTER AHLERS
 Heat Capacity of Beryllium Below 30°K
Phys. Rev., **145**, 419 (1966)
- Be-66017
 R. E. SCHMUNK
 Extention of Dispersion-Relation Measurements of Beryllium
Phys. Rev., **149**, 450 (1966)
- Be-66018
 JAMES A. YOUNG
 Atomic Motion in Moderators
 Reactor Physics in the Resonance and Thermal Regions
 Vol. 1, 3, (1966) M. I. T. Press
- Be-67019
 J. U. KOPPEL, A. A. MARADUDIN
 Phonon Dispersion Relations for Beryllium Metal
Phys. Letters, **24 A**, 244 (1967)
- Be-67020
 J. U. KOPPEL, J. A. YOUNG
 Neutron Scattering in Beryllium
 GA-8031 (1967)
- Be-67021
 Y. NAKAHARA, O. KATO
 FREDAM-BI, A FORTRAN-IV Program for Computation of the Frequency Distributions of Beryllium and Ice by Root Sampling Method
 JAERI-1146 (1967)

Be-68022

J. U. KOPPEL, J. A. YOUNG

Neutron Scattering in Beryllium

Neutron Thermalization and Reactor Spectra Vol. 1, 333
(1968) IAEA

Be-68023

W. GLÄSER

A Review of Scattering Law Studies for Moderators

Neutron Thermalization and Reactor Spectra, Vol. 1,
235 (1968) IAEA

Be-68024

D. I. PAGE, B. C. HAYWOOD

The Harwell Scattering Law Programme: Frequency
Distributions of Moderators

AERE, R-5778 (1968)

Be-68025

W. GLÄSER

Studies of Inelastic Scattering of Slow Neutron by
Moderators

Nukleonik, 11, 282 (1968)

4.6. Diamond

DIMND-63001

E. W. J. MICHAELL, J. R. HARDY, D. H. SAUNDERSON
The Distribution of Higher Energy Normal Modes in
Diamond
ISNSL, Vol. 2, 49 (1963)

DIMND-64002

J. L. YARNELL, J. L. WARREN, R. G. WENZEL
Lattice Vibrations in Diamond
Phys. Rev. Letters, 13, 13 (1964)

DIMND-65003

J. L. WARREN, R. G. WENZEL, J. L. YARNELL
Dispersion Curves for Phonons in Diamond
ISN, Vol. 1, 361 (1965)

DIMND-66004

HERBERT B. ROSENSTOCK, GARY BLANKEN
Interatomic Forces in Various Solids
Phys. Rev., 145, 546 (1966)

DIMND-67005

J. L. WARREN, J. L. YARNELL, G. DOLLING, R. A. COWLEY
Lattice Dynamics of Diamond
Phys. Rev., 158, 805 (1967)

DIMND-67006

R. BLANCHARD, Y. D. VARSHNI
Lattice Dynamics of Diamond
Phys. Rev., 159, 599 (1967)

DIMND-67007

H. L. McMURRY, A. W. SOLBRIG, J. K. BOYTER, C. NOBLE
The Use of Valence Force Potentials in Calculating
Crystal Vibrations
J. Phys. Chem. Solids, 28, 2359, (1967)

4.7. Graphite

GRPHT-91001

K. KOMATSU, T. NAGAMIYA

Theory of the Specific Heat of Graphite
J. Phys. Soc. Japan, 6, 436 (1951)

GRPHT-53002

H. B. ROSENSTOCK

Dynamics of the Graphite Lattice
J. Chem. Phys., 21, 2064 (1953)

GRPHT-53003

J. KRUMHANSL, H. BROOKS

The Lattice Vibration Specific Heat of Graphite
J. Chem. Phys., 21, 1663 (1953)

GRPHT-55004

B. JACROT, F. NETTER, M. GALULA

Time-of-Flight Spectrometry Equipment for Slow
Neutrons in Use at the Saclay Reactor-Its Application
to a Study of the Inelastic Scattering of Cold Neutrons
PICG, Vol. 5, 357 (1955)

GRPHT-55005

K. KOMATSU

Theory of the Specific Heat of Graphite II
J. Phys. Soc. Japan, 10, 346 (1955)

GRPHT-56006

A. YOSHIMORI, Y. KITANO

Theory of the Lattice Vibration of Graphite
J. Phys. Soc. Japan, 11, 352 (1956)

GRPHT-56007

G. R. BALDOCK

Lattice Vibrations and Specific Heat of Graphite
Phil. Mag. Ser. 8, 1, 789 (1956)

GRPHT-58008

A. W. McREYNOLDS, M. S. NELKIN, M. N. ROSENBLUTH,
W. L. WHITTEMORE

Neutron Thermalization by Chemically-bound Hydrogen
and Carbon
PICG, Vol. 16, 297 (1958)

GRPHT-58009

J. C. BOWMAN, J. A. KRUMHANSL

The Low-Temperature Specific Heat of Graphite
J. Phys. Chem. Solids, 6, 367 (1968)

GRPHT-61010

D. E. PARKS

Relation of Crystal Symmetry in Graphite to Lattice
Vibrations on Their Interaction with Slow Neutrons
GA-2125 (1961)

GRPHT-61011

D. E. PARKS

The Calculation of Thermal-Neutron Scattering Kernels
in Graphite
GA-2438 (1961)

GRPHT-61012

A. D. B. WOODS, B. N. BROCKHOUSE, M. SAKAMOTO,
R. N. SINCLAIR
Energy Distributions of Neutrons Scattered from Graphite,
Light and Heavy Water, Ice, Zirconium Hydride Lithium
Hydride, Sodium Hydride and Ammonium Chloride
by the Beryllium Detector Method
ISNSL, 487 (1961)

GRPHT-61013

P. A. EGELSTAFF, S. J. COCKING
The Phonon Frequency Distribution in Graphite at
Several Temperatures
ISNSL, 569 (1961)

GRPHT-62014

P. A. EGELSTAFF
The Scattering of Thermal Neutrons by Moderators
Nuclear Sci. and Eng., 12, 250 (1962)

GRPHT-62015

G. DOLLING, B. N. BROCKHOUSE
Lattice Vibrations in Pyrolytic Graphite
Phys. Rev., 128, 1120 (1962)

GRPHT-62016

D. E. PARKS, J. R. BEYSTER, N. F. WIKNER
Thermal Neutron Spectra in Graphite
Nuclear Sci. and Eng., 13, 306 (1962)

GRPHT-62017

L. S. KOTHARI
Thermal Neutron Scattering in Graphite
BNL-719 (C-32) Vol. 1, 117 (1962)

GRPHT-62018

J. D. MACDOUGALL
Application of Scattering Law Data to the Calculation
of Thermal Neutron Spectra
BNL-719 (C-32) Vol. 1, 121 (1962)

GRPHT-62019

R. P. SCHOFIELD
Theoretical Aspects of the Scattering Law
BNC-719 (C-32) Vol. 1, RB-1 (1962)

GRPHT-63020

P. A. EGELSTAFF, D. H. C. HARRIS
High Energy Modes in the Frequency Distribution of
Graphite
Phys. Letters, 7, 220 (1963)

GRPHT-63021

B. C. HAYWOOD, I. M. THORSON
Frequency Distribution of Normal Modes in Graphite
ISNSL, Vol. 2, 3 (1963)

GRPHT-64022

B. C. HAYWOOD, R. N. SINCLAIR
A Compilation of the Scattering Law for Graphite,
Beryllium and Beryllium Oxide at 22°C
AERE-R 4732 (1964)

GRPHT-64023

B. T. KELLY
The Elastic Constants of Polycrystalline Carbons and
Graphites
Phil. Mag., 9, 721 (1964)

GRPHT-64024

J. V. WILSON
Lattice Vibration Frequency Spectrum of Graphite
ORNL-P-585 (1964)

GRPHT-64025

K. KOMATSU
Interpretation of the Specific Heat of Various Graphites
at Very Low Temperature
J. Phys. Chem. Solids, 25, 707 (1964)

GRPHT-64026

N. F. WIKNER, G. D. JOANOU, D. E. PARKS
Neutron Thermalization in Graphite
Nuclear Sci. and Eng., 19, 108 (1964)

GRPHT-65027

J. A. YOUNG, J. U. KOPPEL
Calculation of Thermal Scattering Kernels
GA-6281 (1965)

GRPHT-65028

J. A. YOUNG, N. F. WIKNER, D. E. PARKS
Neutron Thermalization in Graphite-II
Nukleonik, 7, 295 (1965)

GRPHT-65029

W. L. WHITTEMORE
Inelastic Scattering of Neutrons by Reactor Type
Graphite
BNL 940 (C-45) 94 (1965), (Symposium on Inelastic
Scattering of Neutrons by Condensed Systems)

GRPHT-65030

J. A. YOUNG, J. U. KOPPEL
Phonon Spectrum of Graphite
J. Chem. Phys., 42, 357 (1965)

GRPHT-65031

W. L. WHITTEMORE
Differential Neutron Thermalization
GA-6583 (1965)

GRPHT-66032

J. T. MEERS
Effects of Neutron Damage on the Mechanical Properties
of Pyrolytic and Single-Crystal Graphite
TID-22733 (1966)

GRPHT-66033

J. R. BEYSTER, J. M. NEIL, J. C. YOUNG
Recent Developments in Integral Neutron Thermalization
Reactor Physics in the Resonance and Thermal Regions,
Vol. 1, 151 (1966), M. I. T. Press

GRPHT-66034

JAMES A. YOUNG
Atomic Motion in Moderators
Reactor Physics in the Resonance and Thermal Regions,
Vol. 1, 3 (1966), M. I. T. Press

GRPHT-67035

W. L. WHITTEMORE
 Differential Neutron Thermalization (Annual Summary Report)
 GA-7439 (TID-4500), (1967)

GRPHT-67036

D. I. PAGE
 Scattering Law $S(\alpha, \beta)$ -Values for Graphite at 1300°K and 1800°K
 AERE-R 5574 (1967)

GRPHT-68037

I. P. EREMEEV, V. I. MOSTOVOI, I. P. SADIKOV,
 A. A. CHEYSCHOV
 Study of Inelastic Neutron Scattering in Graphite at Various Temperatures (in Russian)
 Neutron Thermalization and Reactor Spectra, Vol. 1, 343, (1968) IAEA

GRPHT-68038

W. GLÄSER
 A Review of Scattering Law Studies for Moderators
 Neutron Thermalization and Reactor Spectra, Vol. 1, 235 (1958) IAEA

GRPHT-68039

W. L. WHITTEMORE
 Neutron Scattering by Reactor Grade Graphite
Nuclear Sci. and Eng., 33, 31 (1968)

GRPHT-68040

F. CARVALHO
 Inelastic Scattering of Thermal Neutrons in Graphite
Nuclear Sci. and Eng., 34, 224 (1968)

GRPHT-68041

D. I. PAGE, B. C. HAYWOOD
 The Harwell Scattering Law Programme; Frequency Distributions of Moderators
 AERE-R-5778 (1968)

4.8. Nitrogen

N-68001

J. A. YOUNG
 Neutron Scattering from Molecular Nitrogen
 Neutron Thermalization and Reactor Spectra, Vol. 1, 303 (1968), IAEA

4.9. Oxygen

O-68001

T. M. VALENTINE
 Coherent Neutron Scattering Length of ^{17}O
 AERE-R-5770 (1968)

O-68002

G. C. SUMMERFELD, N. A. LURIE
 Inelastic Neutron Scattering by Gaseous O₂
J. Chem. Phys., 49, 890 (1968)

4.10. Neon

Ne-67001
 J. K. JAEN, A. A. KHAN
 WKB Approximation of Quantum Radial Distribution Function Applied to Fluid Neon
J. Chem. Phys., 49, 260 (1967)

4.11. Sodium

Na-58001
 T. TOYA
 Normal Vibration of Sodium
J. Res. Inst. Catalysis. Hokkaido Univ., 4, 183 (1958)

Na-62002
 A. D. B. WOODS, B. N. BROCKHOUSE, R. H. MARCH, R. BOWERS
 Normal Vibrations of Sodium
Proc. Phys. Soc., 79, 440 (1962)

Na-62003
 A. D. B. WOODS, B. N. BROCKHOUSE, R. H. MARCH, A. T. STEWART, R. BOWERS
 Crystal Dynamics of Sodium at 90°K
Phys. Rev., 128, 1112 (1962)

Na-63004
 S. J. COCKING
 Studies of Liquid Sodium by Inelastic Scattering of Slow Neutrons
 ISNSL, Vol. 1, 227 (1963)

Na-63005
 B. N. BROCKHOUSE, L. N. BECKA, K. R. RAO, A. D. B. WOODS
 Determination of Polarization Vectors from Neutron Group Intensities
 ISNSL, Vol. 2, 23 (1963)

Na-63006
 W. COCHRAN
 Lattice Dynamics of Sodium
Proc. Roy. Soc., A 276, 308 (1963)

Na-65007
 K. S. SINGWI, G. FELDMANN
 Coherent Scattering of Slow Neutrons by Liquid Sodium
 ISN, Vol. 2, 85 (1965)

Na-65008
 K. KREBS
 Dispersion Curves and Lattice Frequency Distribution of Metals
Phys. Rev., 138, A 143 (1965)

Na-65009
 SATYA PRAKASH, S. K. JOSHI
 Force Constants of Sodium
Phys. Rev., 140, A 1754 (1965)

Na-65010
 L. T. SHAM

- A Calculation of the Phonon Frequencies in Sodium
Proc. Roy. Soc., **283**, 33 (1965)
- Na-66011
 MARY E. DIEDERICH, J. TRIVISONNO
 Temperature Dependence of the Elastic Constants of Sodium
J. Phys. and Chem. Solids, **27**, 637 (1966)
- Na-66012
 HERBERT B. ROSENSTOCK, GARY BLANKEN
 Interatomic Forces in Various Solids
Phys. Rev., **145**, 546 (1966)
- Na-66013
 R. M. BRUGGER
 Interpretation of Scattering-Law Data
 Reactor Physics in the Resonance and Thermal Regions, Vol. 1, 91 (1966), M. I. T. Press
- Na-67014
 J. H. FERZIGER, D. L. FEINSTEIN
 Collective Effects and the Hydrodynamic Approximation in Neutron Scattering from Fluid
Phys. Rev., **158**, 1 (1967)
- Na-68015
 V. ARDENTE, G. F. NARDELLI, L. REATTO
 Scattering of Slow Neutrons and Molecular Dynamics in Liquid State
 EUR-4037 i (1968)
- Na-68016
 S. J. COCKING
 Studies of the Liquid State Using the Inelastic Scattering of Slow Neutrons
 AERE-R 5867 (1968)
- 4.12. Magnesium**
- Mg-62001
 M. F. COLLINS
 Lattice Dynamics of Magnesium
Proc. Phys. Soc., **80**, 362 (1962)
- Mg-63002
 E. MALISZEWSKI, J. SOSUSWSKI, K. BLINOWSKI,
 J. KOZUBOWSKI, I. PADLO, D. SLEDZIEWSKA
 Neutron-Phonon Interaction Studies in Copper, Zinc and Magnesium Single Crystals
 ISNSL, Vol. **2**, 87 (1963)
- Mg-63003
 P. K. IYENGER, G. VENKATARAMAN, K. R. RAO,
 P. R. VIJAYARAGHAVAN, A. P. ROY
 Dispersion Relations for Phonon in Magnesium
 ISNSL, Vol. **2**, 99 (1963)
- Mg-64004
 J. A. YOUNG, J. U. KOPPEL
 Lattice Vibrational Spectra of Beryllium, Magnesium and Zinc
Phys. Rev., **134**, 1476 (1964)
- Mg-65005
 P. K. IYENGER, G. VENKATARAMAN,
 P. R. VIJAYARAGHAVAN, A. P. ROY
 Lattice Dynamics of Magnesium
 ISN, Vol. **1**, 153 (1965)
- Mg-65006
 G. W. LEHMAN, T. WOLFRAM, R. E. DE WAMES
 Studies in Lattice Dynamics of Metals Using the A-S Model
 "Lattice Dynamics" (ed. by R. F. WALLIS) 101 (1965), Pergamon Press
- Mg-65007
 P. K. IYENGER, G. VENKATARAMAN,
 P. R. VIJAYARAGHAVAN, A. P. ROY
 Dispersion Relations for Phonons in Magnesium
 "Lattice Vibration" (ed. by R. E. WALLIS) 223 (1965), Pergamon Press
- 4.13. Aluminium**
- Al-57001
 R. S. CARTER, H. PALEVSKY, D. J. HUGHES
 Inelastic Scattering of Slow Neutrons by Lattice Vibrations in Aluminum
Phys. Rev., **106**, 1168 (1957)
- Al-58002
 B. N. BROCKHOUSE, A. T. STEWART
 Normal Modes of Aluminum by Neutron Spectrometer
Rev. Modern. Phys., **30**, 236 (1958)
- Al-60003
 K. E. LARSSON, U. DAHLBORG, S. HOLMRYD
 A Study of Some Temperature Effects on the Phonons in Aluminum by Use of Cold Neutrons
Arkiv. Fysik., **17**, 369 (1960)
- Al-61004
 K. E. LARSSON, S. HOLMRYD, V. DAHLBORG
 Measurements of the Temperature Dependence of the Phonons in Aluminium
 ISNSL, 587 (1961)
- Al-62005
 K. E. LARSSON, U. DAHLBORG
 Some Vibrational Properties of Solid and Liquid H_2O and D_2O Derived from Experimental Cross-Section Measurements
Reactor Sci. Tech., **16**, 81 (1962)
- Al-62006
 G. W. LEHMAN, T. WOLFRAM, R. E. DE WAMES
 Axially Symmetric Model for Lattice Dynamics of Metals with Application to Cu, Al and ZrH_2
Phys. Rev., **128**, 1593 (1962)
- Al-63007
 G. L. SQUIRES
 The Frequencies of the Normal Modes of Aluminum
 ISNSL, Vol. **2**, 55 (1963)

Al-65008

R. E. SCHMUNK, R. M. BRUGGER, P. D. RANDOLPH
 Interference Effects in Slow Neutron Inelastic Scattering
 from Polycrystalline Solids
 ISN, Vol. 1, 379 (1965)

Al-65009

R. STEDMAN, G. NILSSON
 Observations on the Fermi Surface of Aluminum by
 Neutron Spectrometry
Phys. Rev. Letters, 15, 634 (1965)

Al-65010

A. T. STEDMAN, G. NILSSON
 Phonon in Aluminium at 80°K
 ISN, Vol. 1, 211 (1965)

Al-65011

J. L. YARNELL, J. L. WARREN, S. H. KOENIG
 Experimental Dispersion Curves for Phonons in
 Aluminum
 "Lattice Dynamics" (ed. by R. F. WALLIS) 57 (1965),
 Pergamon Press

Al-65012

K. E. LARSSON, U. DAHLBORG, D. JOVIC
 Collective Atomic Motions in Liquid Aluminium Studied
 by Cold Neutron Scattering
 INS, Vol. 2, 117 (1965)

Al-66013

R. STEDMAN, G. NILSSON
 Dispersion Relations for Phonons in Aluminum at 80
 and 300°K
Phys. Rev., 145, 492 (1966)

Al-66014

R. M. BRUGGER
 Interpretation of Scattering-Law Data
 Reactor Physics in the Resonance and Thermal Regions
 Vol. 1, 91 (1966), M. I. T. Press

Al-67015

G. BJORKMAN, B. I. LUNDQVIST, A. SJÖLANDER
 Damping of Phonons in Aluminum
Phys. Rev., 159, 551 (1967)

Al-67016

R. STEDMAN, L. ALMQVIST, G. NILSSON
 Phonon-Frequency Distributions and Heat Capacities of
 Almumium and Lead
Phys. Rev., 162, 549 (1967)

Al-67017

S. J. COCKING
 High Frequency Waves in Liquids Metals
Adv. Phys., 16, 189 (1967)

Al-68018

S. GRIMVALL, G. GRIMVALL
 X-Ray Debye Temperature for Al, Nb and Pb
Acta Cryst., A 24, 612 (1968)

4.14. Silicon

Si-59001

B. N. BROCKHOUSE
 Lattice Vibrations in Silicon and Germanium
Phys. Rev. Letters, 2, 256 (1959)

Si-59002

B. N. BROCKHOUSE
 Lattice Vibrations of Semiconductors by Neutron
 Spectrometry
J. Phys. and Chem. Solids, 8, 400 (1959)

Si-61003

G. DOLLING
 Phonon Dispersion Relations for a Silicon Singls Crystal
 ISNSL, 563 (1961)

Si-63004

G. DOLLING
 Lattice Vibrations in Crystals with Diamond Structure
 ISNSL, Vol. 2, 37 (1963)

Si-65005

G. DOLLING
 Inelastic Neutron Scattering from Doped Germanium
 and Silicon
 ISN, Vol. 1, 249 (1965)

Si-66006

HERBERT B. ROSENSTOCK, GARY BLANKEN
 Interatomic Forces in Various Solids
Phys. Rev., 145, 546 (1966)

Si-68007

R. M. MARTIN
 Lattice Vibrations in Silicon : Microscopic Dielectric
 Model
Phys. Rev. Letters, 21, 536 (1968)

4.15. Argon

Ar-63001

B. N. BROCKHOUSE, J. BERGSMA, B. A. DASANNACHARYA,
 N. K. POPE
 Liquid Dynamics from Neutron Spectrometry
 ISNSL, Vol. 1, 189 (1963)

Ar-64002

N. KROÓ, G. BORGONOV, K. SKÖLD, K. E. LARSSON
 Inelastic Scattering of Cold Neutrons by Condensed
 Argon
Phys. Rev. Letters, 12, 721 (1964)

Ar-65003

N. KROÓ, G. BORGONOV, K. SKÖLD, K. R. LARSSON
 Inelastic Scattering of Cold Neutrons by Condensed
 Argon
 ISN, Vol. 2, 101 (1965)

Ar-65004

B. A. DASANNACHARYA, K. R. RAO
 Neutron Scattering from Liquid Argon
Phys. Rev., 137, A 417 (1965)

Ar-65005

J. GRINDLAY, R. HOWARD

On the Lattice Dynamics and Specific Heat of the Rare-Gas Solids

"Lattice Dynamics" (ed. [R. F. WALLIS]) 129 (1965),
Pergamon Press

Ar-65006

P. D. RANDOLPH

Slow Neutron Scattering Studies of Liquid and Solid Argon

IDO 16069 (1965)

Ar-65007

P. D. RANDOLPH

Slow Neutron Scattering Studies of Liquid and Solid Argon

TID 17089 (1965)

Ar-66008

ANEESUR RAHMAN

Liquid Structure and Self Diffusion

J. Chem. Phys., **45**, 2585 (1966)

Ar-66009

TASHMI C. DESAI, MARK NEKLIN

Collective Motion in Liquid Argon
Phys. Rev. Letters, **16**, 839 (1966)

Ar-66010

ANEESUR RAHMAN

The Velocity Autocorrelation Function in Liquids from a New Point of View

Reactor Physics in the Resonance and Thermal Regions, Vol. 1, 123 (1966), M. I. T. Press

Ar-66011

R. M. BRUGGER

Interpretation of Scattering-Law Data

Reactor Physics in the Resonance and Thermal Regions, Vol. 1, 91 (1966), M. I. T. Press

Ar-67012

P. G. MIKOLAJ, C. J. PINGS

Structure of Liquids. III. An X-ray Diffraction Study of Fluid Argon

J. Chem. Phys., **46**, 1401 (1967)

Ar-67013

P. G. MIKOLAJ, C. J. PINGS

Structure of Liquids. IV. Direct Correlations Functions of Liquid Argon

J. Chem. Phys., **46**, 1412 (1967)

Ar-67014

A. C. LEVI

On the Motions of Atom in a Liquid as a Stochastic Process

Physica, **36**, 324 (1967)

Ar-67015

K. SKÖLD, K. E. LARSSON

Atomic Motion in Liquid Argon

Phys. Rev., **161**, 102 (1967)

Ar-68016

R. C. DESAI, S. YIP

Dynamical Correlations in Simple Liquids and Cold-Neutron Scattering by Argon

Phys. Rev., **166**, 129 (1968)

Ar-68017

K. S. SINGWI, A. SJÖLANDER

Theory of Atomic Motions in Simple Classical Liquids

Phys. Rev., **167**, 152 (1968)

Ar-68018

P. C. MARTIN, S. YIP

Frequency Dependent Friction Constant Analysis of Diffusion in Simple Liquids

Phys. Rev., **170**, 151 (1968)

Ar-68019

W. S. ANDRUS, H. R. MUETHER, H. PALEVSKY

Inelastic Scattering of Cold Neutrons from Liquid Argon at Elevated Temperatures

Phys. Letters, **26 A**, 152 (1968)

Ar-68020

W. S. ANDRUS, H. R. MUETHER, H. PALEVSKY

Temperature Dependence of Quasi-Elastic Scattering of Cold Neutrons from Liquid Argon

BNL-12372 (1968)

Ar-68021

C. D. ANDRIESSE

On the Convolution Approximation in the Theory of Coherent Neutron Scattering from Liquids

Phys. Letters, **27 A**, 93 (1968)

Ar-68022

W. S. ANDRUS, H. R. MUETHER, H. PALEVSKY

Inelastic Scattering of Cold Neutrons from Liquid Argon at Elevated Temperatures

Phys. Letters, **26 A**, 152 (1968)

Ar-68023

V. ARDENTE, G. F. NARDELLI, L. REATTO

Scattering of Slow Neutrons and Molecular Dynamics in Liquid State

EUR-4037 i (1968)

4.16. Potassium

K-65001

K. KREBS

Dispersion Curves and Lattice Frequency Distribution of Metals

Phys. Rev., **138**, A 143 (1965)

K-66002

R. A. COWLEY, A. D. B. WOODS, G. DOLLING

Crystal Dynamics of Potassium-I. Pseudopotential Analysis of Phonon Dispersion Curves at 9°K

Phys. Rev., **150**, 487 (1966)

4. 17. Titanium

Ti-65001

B. MOZER, K. OTNES, H. PALEVSKY
 Measured Vibrational Frequency Distribution of Ni, V,
 Ti and $Ti_{67}Zr_{33}$
 "Lattice Dynamics" (ed. by R. F. WALLIS), 63 (1965),
 Pergamon Press

V-65009

R. RUBIN, J. PERETTI, G. VERDAN, W. KLEY
 Inelastic Scattering of Cold Neutrons by Localized Modes
 in Vanadium Hydride Systems
Phys. Letters, 14, 100 (1965)

V-65010

W. GLÄSER, F. CARVALLO, G. EHRET
 Phonon Frequency Distribution of Vanadium
 ISN, Vol. 1, 99 (1965)

V-67011

A. P. ROY C. L. THAPER, P. K. IYENGER
 Lattice Vibration of Vanadium by Inelastic Scattering
 of Slow Neutrons
Physica, 34, 384 (1967)

4. 18. Vanadium

V-58001

A. T. STEWART, B. N. BROCKHOUSE
 Vibration Spectra of Vanadium and a Mn-Co Alloy by
 Neutron Spectrometry
Rev. Modern Phys., 30, 250 (1958)

Cr-65001

H. B. MÖLLER, A. R. MACKINTOSH
 Inelastic Scattering of Neutrons in Chromium
 ISN, Vol. 1, 95 (1965)

4. 20. Iron

Fe-61001

P. K. IYENGER, N. S. SATYA MURTHY, B. A. DASANNA-
 CHARYA
 Inelastic Scattering of Neutrons from Iron
 ISN, 555 (1961)

Fe-62002

G. G. E. LOW
 Some Measurements of Phonon Dispersion Relations in
 Iron
Proc. Phys. Soc., 79, 479 (1962)

Fe-67003

J. BERGSMA, C. VAN DIJK, D. TOCCETTI
 Normal Vibrations in α -Iron
Phys. Letters, 24 A, 270 (1967)

Fe-67004

B. N. BROCKHOUSE, H. E. ABOU-HELAL, E. D. HALLMAN
 Lattice Vibrations in Iron at 296°K
Solid State Commun., 5, 211 (1967)

Fe-67005

J. BERGSMA, C. VAN DIJK, D. TOCCETTI
 Normal Vibrations in α -Iron
 RCN-74

Fe-67006

V. J. MINKIEWICZ, G. SHIRANE, R. NATHANS
 Phonon Dispersion Relation for Iron
Phys. Rev., 162, 528 (1967)

Fe-67007

W. VAN DINGENEN, S. HAUTECLER
 Dispersion Relations for Phonons and Magnons in α -Fe
Physica, 37, 603 (1967)

V-53002

C. M. EISENHAUER, I. PELAH, D. J. HUGHES, H. PALEVSKY
 Measurement of Lattice Vibrations in Vanadium by
 Neutron Scattering
Phys. Rev., 109, 1046 (1958)

V-61003

K. C. TURBERFIELD, P. A. EGELESTAFF
 The Phonon Frequency Distribution in Vanadium at
 Several Temperatures
 ISN, 581 (1961)

V-62004

K. C. TURBERFIELD, P. A. EGELESTAFF
 Phonon Frequency Distribution in Vanadium at Several
 Temperatures
Phys. Rev., 127, 1017 (1962)

V-63005

M. G. ZEMLYANOV, Yu. M. KAGAN, N. A. TCHERNOBLEBOV,
 A. G. TCHTSERIN
 A Study of the Phonon Spectrum and Dispersion Curve
 for Vanadium
 ISN, Vol. 2, 125 (1963)

V-63006

R. HAAS, W. KLEY, K. H. KREBS, R. RUBIN
 The Phonon Frequency Distribution of Vanadium
 ISN, Vol. 2, 145 (1963)

V-63007

L. PELAH, R. HAAS, W. KLEY, K. H. KREBS, J. PERETTI,
 R. RUBIN
 Observation of a Low Energy Peak in the Phonon
 Frequency Distribution of Vanadium
 ISN, Vol. 2, 155 (1963)

V-65008

B. MOZER, K. OTNES, H. PALEVSKY
 Measured Vibrational Frequency Distribution of Ni, V,
 Ti and $Ti_{67}Zr_{33}$
 "Lattice Dynamics" (ed. by R. F. WALLIS), 63 (1965),
 Pergamon Press

4.21. Nickel

Ni-63001

N. A. TCHERNOPOLEKOV, M. G. ZEMLYANOV, M. G. TCHETSERIN, B. G. LYASHTCHENKO
 Investigation of the Phonon Spectrum of Nickel
ISNSL, Vol. 2, 159 (1963)

Ni-63002

B. MOZER, K. OTNES
 Measurements of the Vibrational Frequency Spectrum of Nickel-Palladium Alloys
ISNSL, Vol. 2, 167 (1963)

Ni-64003

R. M. BRUGGER
 A New Method of Measuring Frequency Distributions of Crystals
AERE-R 4562 (1964)

Ni-64004

R. J. BIRGENEAU, J. CORDES, G. DOLLING, A. D. B. WOODS
 Normal Modes of Vibration in Nickel
Phys. Rev., 136, A 1359 (1964)

Ni-65005

B. MOZER, K. OTNES, H. PALEVSKY
 Measured Vibrational Frequency Distribution of Ni, V, Ti and Ti_6Zr_{33}
 "Lattice Dynamics" (ed. by R. F. WALLIS) 63 (1965), Pergamon Press

Ni-67006

S. P. SINGH
 Lattice Dynamics of Nickel
Can. J. Phys., 45, 1655 (1967)

Ni-67007

S. HAUTELCLER, W. VAN DINGENEN
 Lattice Dynamics of Nickel
Physica, 34, 257 (1967)

Ni-68008

G. A. DEWIT, J. N. BROCKHOUSE
 The Lattice Dynamics of Ferromagnetic and Paramagnetic Nickel
J. Appl. Phys., 39, 451 (1968)

4.22. Copper

Cu-58001

T. TOYA
 Normal Vibrations of Copper
Prog. Theor. Phys., 20, 974 (1958)

Cu-61002

D. CRIBIER, B. JACROT, D. SAINT-JAMES
 Neutron Scattering by Phonon in a Monocrystal
ISNSL, 549 (1961)

Cu-62003

J. SOSNOWSKI, J. KOZUBOWSKI
 Phonon Dispersion Relations for Copper Single Crystal

in the [100] Direction

J. Phys. Chem. Solids, 23, 1021 (1962)

Cu-62004

G. W. LEHMAN, T. WOLFRAM, R. E. DE WAMES
 Axially Symmetric Model for Lattice Dynamics of Metals with Application to Cu, Al and ZrH_2
Phys. Rev., 128, 1593 (1962)

Cu-63005

E. MALISZEWSKI, J. SOSUSWSKI, K. BLINOWSKI, J. KOZUBOWSKI, I. PADLO, D. SLEDZIEWSKA
 Neutron-Phonon Interaction Studies in Copper, Zinc and Magnesium Single Crystals
ISNSL, Vol. 2, 87 (1963)

Cu-65006

S. K. SINHA, G. L. SQUIRES
 The Frequencies of the Normal Modes of Copper
 "Lattice Dynamics" (ed. by R. F. WALLIS) 53 (1965)

Cu-65007

E. Z. VINTAIKIN, U. V. GORBACHEV, P. L. GRUZIN
 Investigation of the Thermal Vibrations of the Atoms in Copper by Neutron Spectrometry
Soviet Phys.-Solid State, 7, 296 (1965)

Cu-66008

S. K. SINHA
 Lattice Dynamics of Copper
Phys. Rev., 143, 143 (1966)

Cu-67009

R. P. GUPTA, P. K. SHARMA
 Debye-Waller Factors of Copper and Gold
J. Chem. Phys., 46, 1359 (1967)

Cu-67010

R. M. NICKLOW, G. GILAT, H. G. SMITH, L. J. RAUBENHEIMER, M. K. WILKINSON
 Phonon Frequencies in Copper at 49 and 298°K
Phys. Rev., 164, 922 (1967)

4.23. Zinc

Zn-63001

E. MALISZEWSKI, J. SOSUSWSKI, K. BLINOWSKI, J. KOZUBOWSKI, I. PADLO, D. SLEDZIEWSKA
 Neutron-Phonon Interaction Studies in Copper, Zinc and Magnesium Single Crystals
ISNSL, Vol. 2, 87 (1963)

Zn-63002

G. BARGONOV, G. CAGLIOTTI, J. J. ANTAL
 A Study of the Crystal Dynamics of Zinc
Phys. Rev., 132, 683 (1963)

Zn-64003

J. A. YOUNG, J. U. KOPPEL
 Lattice Vibrational Spectra of Beryllium and Magnesium and Zinc
Phys. Rev., 134, 1476 (1964)

Zn-65004

A. HOLAS

Note on Dispersion Curve Calculations in Zinc
ISN, Vol. 1, 205 (1965)

Zn-65005

R. E. DEWAMES, T. WOLFRAM, G. W. LEHMAN
Lattice Dynamics, Heat Capacities, and Debye-Waller Factor for Be and Zn Using a Modified Axially Symmetric Model
Phys. Rev., **138**, A 717 (1965)

Zn-65006

E. MALISZEWSKI, J. H. ROSULAWSKI, D. SLEDZIEWSKA.
Lattice Dynamics of Zinc "Lattice Dynamics" (ed. by R. F. WALLIS) 33 (1965) Pergamon Press

Zn-68007

D. M. NORTH, J. E. ENDERBY, P. A. EGELSTAFF
The Structure Factor for Liquid Metals: II-Results for Liquid Zn, Tl, Pb, Sn and Bi
J. Phys. C, Ser., **2**, 1, 1075 (1968)

4. 24. Germanium

Ge-58001

B. N. BROCKHOUSE, P. K. IYENGAR
Normal Modes of Germanium by Neutron Spectrometry
Phys. Rev., **111**, 747 (1958)

Ge-59002

B. N. BROCKHOUSE
Lattice Vibrations of Semiconductors by Neutron Spectrometry
J. Phys. and Chem. Solids, **8**, 400 (1959)

Ge-59003

B. N. BROCKHOUSE
Lattice Vibrations in Silicon and Germanium
Phys. Rev. Letters, **2**, 256 (1959)

Ge-59004

A. GHOSE, H. PALEVSKY, D. J. HUGHES, I. PELAH, C. M. EISENHAUER
Lattice Vibrations in Germanium by Scattering of Cold Neutrons
Phys. Rev., **113**, 49 (1959)

Ge-63005

B. N. BROCKHOUSE, L. N. BECKA, K. R. RAO, A. D. B. WOODS
Determination of Polarization Vectors from Neutron Group Intensities
ISNSL, Vol. **2**, 23 (1963)

Ge-63006

B. N. BROCKHOUSE, B. A. DASANNACHAYA
Temperature Effects on Lattice Vibrations in Germanium
Solid State Commun., **1**, 205 (1963)

Ge-63007

B. N. BROCKHOUSE, L. N. BECKA, K. R. RAO, A. D. B. WOODS
Determination of Polarization Vectors from Neutron Group Intensities

ISNSL, Vol. **2**, 23 (1963)

Ge-65008

G. DOLLING
Inelastic Neutron Scattering from Doped Germanium and Silicon
ISN, Vol. **1**, 249 (1965)

Ge-65009

N. K. POPE
The Force Constants of Germanium
"Lattice Dynamics" (ed. by R. F. WALLIS) 147 (1965),
Pergamon Press

Ge-66010

HERBERT B. ROSENSTOCK, GARY BLANKEN
Interatomic Forces in Various Solids
Phys. Rev., **145**, 546 (1966)

4. 25. Selenium

Se-67001

E. H. HENNINGER, R. C. BUSCHERT, LEROY HEATON,
Atomic Radial Distribution in Amorphous Selenium by X-ray and Neutron Diffraction
J. Chem. Phys., **46**, 586 (1967)

4. 26. Bromine

Br-63001

G. E. COOTE, B. C. HAYWOOD
Scattering of Neutrons by Liquid Bromine
ISNSL, Vol. **1**, 249 (1963)

Br-63002

G. CAGLIOTTI, P. ASCARELLI
Neutron Spectroscopy Work at the CNEN
ISNSL, Vol. **1**, 259 (1963)

Br-64003

M. ANTONINI, P. ASCARELLI, G. CAGLIOTTI
Coherent Inelastic Scattering of Slow Neutrons by a Polyatomic Liquid Element
Phys. Rev., **136**, A 1280 (1964)

Br-67004

JOHN M. CARPENTER
Orientation-Averaged Amplitude of the One-Quantum Term in the Neutron Scattering Law for Molecular Gases
J. Chem. Phys., **46**, 465 (1967)

Br-68005

J. M. CARPENTER, R. A. SCHAEFER
Amplitude of the Tow Quantum in the Scattering Law for Molecular Gases
Neutron Thermalization and Reactor Spectra, Vol. **1**, 293 (1968), IAEA

4. 27. Krypton

Kr-65001

J. GRINDLAY, R. HOWARD

- On the Lattice Dynamics, Specific Heat of the Rare-Gas Solid
 "Lattice Dynamics" (ed. by R. F. WALLIS) 129 (1965),
 Pergamon Press
- Kr-67002
 J. S. BROWN, G. K. HORTON
 Model Potentials and the Dispersion Law in Solid Krypton
Phys. Rev. Letters, **18**, 647 (1967)
- Kr-67003
 T. HOGBERG, L. BÖHLIN
 Anharmonic Effects on Phonons in Solid Krypton
Solid State Commun., **5**, 951 (1967)
- 4.28. Rubidium**
- Rb-67001
 S. J. COCKING
 High Frequency Waves in Liquid Metals
Adv. Phys., **16**, 189 (1967)
- 4.29. Niobium**
- Nb-63001
 Y. NAKAGAWA, A. D. B. WOODS
 Lattice Dynamics of Niobium
Phys. Rev. Letters, **11**, 271 (1963)
- Nb-65002
 A. D. B. WOODS
 Lattice Dynamics of Transition Metals
 ISN, Vol. 1, 87 (1965)
- Nb-65003
 Y. NAKAGAWA, A. D. B. WOODS
 Lattice Dynamics of Niobium
 "Lattice Dynamics" (ed. by R. F. WALLIS) 39 (1965),
 Pergamon Press
- Nb-66004
 HERBERT B. ROSENSTOCK, GARY BLANKEN
 Interatomic Forces in Various Solids
Phys. Rev., **145**, 546 (1966)
- Nb-68005
 S. GRIMVALL, G. GRIMVALL
 X-ray Debye Temperature for Al, Nb and Pb
Acta Cryst., **A 24**, 612 (1968)
- 4.30. Molybdenum**
- Mo-64001
 A. D. B. WOODS, S. H. CHEN
 Lattice Dynamics of Molybdenum
Solid State Commun., **2**, 233 (1964)
- Mo-65002
 A. D. B. WOODS
 Lattice Dynamics of Transition Metals
 ISN, Vol. 1, 87 (1965)
- Mo-66003
 HERBERT B. ROSENSTOCK, GARY BLANKEN
 Interatomic Forces in Various Solids
Phys. Rev., **145**, 546 (1966)
- 4.31. Palladium**
- Pd-63001
 B. MOZER, K. OTONES
 Measurements of the Vibrational Frequency Spectrum of Nickel-Palladium Alloys
 ISNSL, Vol. **2**, 167 (1963)
- Pd-68002
 A. P. MÜLLER, B. N. BROCKHOUSE
 Anomalous Behavior of the Lattice Vibrations and the Electronic Specific Heat of Palladium
Phys. Rev. Letters, **20**, 798 (1968)
- 4.32. Tin**
- Sn-61001
 H. PALEVSKY
 A Study of the Diffusive Motions of Liquids by Means of Cold-Neutron Scattering Experiments
 ISNSL, 265 (1961)
- Sn-63002
 B. N. BROCKHOUSE, J. BERGSMA, B. A. DADANNACHARYA, N. K. POPE
 Liquid Dynamics from Neutron Spectrometry
 ISNSL, Vol. **1**, 189 (1963)
- Sn-63003
 T. WOLFRAM, G. W. LEHMAN, R. E. DE WAMES
 Lattice Dynamics of White Tin
Phys. Rev., **129**, 2483 (1963)
- Sn-63004
 S. J. COCKING, Z. GUNER
 Comparative Studies of Slow Neutron Scattering by Solid and Liquid Tin
 ISNSL, Vol. **1**, 237 (1963)
- Sn-63005
 M. J. P. MUSGRAVE
 On the Relation between Gray and White Tin
Proc. Roy. Soc., **A 272**, 503 (1963)
- Sn-64006
 R. E. DE WAMES, G. W. LEHMAN
 Re-examination of the Lattice Dynamics of White Tin Using a Modified Axially Symmetric Model
Phys. Rev., **135**, A 170 (1964)
- Sn-65007
 R. E. SCHMUNK, W. R. GAUIN
 Dispersion Relations of White Tin
Phys. Rev. Letters, **14**, 44 (1965)
- Sn-65008
 J. M. ROWE, B. N. BROCKHOUSE, E. C. SVENSSON
 Lattice Dynamics of White Tin
Phys. Rev. Letters, **14**, 554 (1965)

Sn-65009

G. BORGONOV, G. CAGLIOTI, M. ANTONINI
 Recent Results on the Crystal Physics of White Tin
 ISN, Vol. 1, 117 (1965)

Sn-65010

H. PALEVSKY
 A Study of the Diffusive Motions of Liquids by Means
 of Cold-Neutron Scattering Experiments
 ISN, Vol. 2, 265 (1965)

Sn-65011

D. LONG-PRICE
 Phonon in White Tin
 ISN, Vol. 1, 109 (1965)

Sn-65012

E. G. BROVMAN, YU KAGAN
 The Vibration Spectrum of the White Tin Lattice
 ISN, Vol. 1, 131 (1965)

Sn-65013

M. J. P. MUSGRAVE
 Lattice Dynamical Model for Gray and White Tin and
 Their Relevance to Transitions at High Pressure
 "Lattice Dynamics" (ed. by R. F. WALLIS) 189 (1965),
 Pergamon Press

Sn-66014

HERBERT B. ROSENSTOCK, GARY BLANKEN
 Interatomic Forces in Various Solids
Phys. Rev., 145, 546 (1966)

Sn-67015

E. G. BROVMAN, YU. KAGAN
 On the Phonon Spectrum of Metals
Soviet Phys. JETP, 52, 557 (1967)

Sn-67016

M. I. KAY, H. L. RITTER
 The Coherent Neutron Scattering Amplitudes for Seven
 Isotopes of Tin
Acta Cryst., 23, 868 (1967)

Sn-67017

S. J. COCKING
 High Frequency Waves in Liquid Metals
Adv. Phys., 16, 189 (1967)

Sn-67018

V. W. MYERS
 Inelastic Scattering of Cold Neutrons in Polycrystalline
 Gray Tin
J. Phys. and Chem. Solids 28, 2207 (1967)

Sn-67019

D. L. PRICE
 Lattice Dynamics of White Tin
Proc. Roy. Soc., 300, 25 (1967)

Sn-68020

D. M. NORTH, J. E. ENDERBY, P. A. EGELSTAFF
 The Structure Factor for Liquid Metals: II-Results for
 Liquid Zn, Tl, Pb, Sn and Bi

J. Phys. C, Ser. 2, 1, 1075 (1968)

4.33. Tellurium

Te-65001

M. HULIN
 Lattice Dynamics of Tellurium
 "Lattice Dynamics" (ed. by R. F. WALLIS) 135 (1965),
 Pergamon Press

4.34. Tantalum

Ta-64001

A. D. B. WOODS
 Lattice Dynamics of Tantalum
Phys. Rev., 136, A 781 (1964)

Ta-65002

A. D. B. WOODS
 Lattice Dynamics of Transition Metal
 ISN, Vol. 1, 87 (1965)

Ta-66003

HERBERT B. ROSENSTOCK, GARY BLANKEN
 Interatomic Forces in Various Solids
Phys. Rev., 145, 546 (1966)

4.35. Tungsten

W-64001

S. H. CHEN, B. N. BROCKHOUSE
 Lattice Vibrations of Tungsten
Solid State Commun., 2, 73 (1964)

W-65002

A. D. B. WOODS
 Lattice Dynamics of Transition Metals
 ISN, Vol. 1, 87 (1965)

W-66003

HERBERT B. ROSENSTOCK, GARY BLANKEN
 Interatomic Forces in Various Solids
Phys. Rev., 145, 546 (1966)

4.36. Gold

Au-67001

R. P. GUPTA, P. K. SHARMA
 Debye-Waller Factors of Copper and Gold
J. Chem. Phys., 46, 1359 (1967)

4.37. Lead

Pb-54001

P. A. EGELSTAFF
 Inelastic Scattering of Cold Neutrons by Liquid
Acta Cryst., 7, 673 (1954)

Pb-55002

B. N. BROCKHOUSE
 Slow Neutron Spectrometry
Phys. Rev., 98, 1171 (1955)

- Pb-59003
B. N. BROCKHOSE
 Time-Dependent Pair Correlations in Liquid Lead
Phys. Rev. Letters, **3**, 259 (1959)
- Pb-61004
B. N. BROCKHOUSE, K. R. RAO, A. D. B. WOODS
 Image of the Fermi Surface in the Lattice Vibrations of Lead
Phys. Rev. Letters, **7**, 93 (1961)
- Pb-62005
P. A. EGELSTAFF, P. SCHOFIELD
 On the Evaluation of the Thermal Neutron Scattering Law
Nuclear Sci. and Eng., **12**, 260 (1962)
- Pb-62006
M. J. COTTER
 Inelastic Scattering of Cold Neutrons by Solid and Liquid Lead
 Dissertation, Fordham University, New York (1962)
- Pb-62007
B. N. BROCKHOUSE, T. ARASE, G. CAGLIOTTI, K. R. RAO, A. D. B. WOODS
 Crystal Dynamics of Lead-I. Dispersion Curves at 100°K
Phys. Rev., **128**, 1099 (1962)
- Pb-62008
K. C. TURBERFIELD
 The Atomic Motions in Liquid Lead
Proc. Phys. Soc., **80**, 395 (1962)
- Pb-63009
K. S. SINGWI, A. SJÖLANDER, A. RAHMAN
 Frequency Spectrum of Liquids and Cold Neutron Scattering
ISNSL, Vol. **2**, 215 (1963)
- Pb-65010
H. PALEVSKY
 A Study of the Diffusive Motions of Liquids by Means of Cold-Neutron Scattering Experiments
ISN, Vol. **1**, 265 (1965)
- Pb-65011
T. TOYA
 Lattice Dynamics of Lead
 "Lattice Dynamics" (ed. by R. F. WALLIS) 91 (1965),
 Pergamon Press
- Pb-65012
S. J. COCKING, P. A. EGELSTAFF
 Frequency-Wave Number Relationship for Cooperative Modes of Motion in Liquid Lead and Tin
Phys. Letters, **16**, 130 (1965)
- Pb-66013
P. D. RANDOLPH
 Liquid Lead
 WASH-1068 (EANDC (US) 85U) 175 (1966)
- Pb-66014
P. D. RANDOLPH, K. S. SINGWI
 Slow Neutron Scattering and Collective Motions in Liquid Lead
Phys. Rev., **152**, 99 (1966)
- Pb-66015
R. M. BRUGGER
 Interpretation of Scattering-Law Data
 Reactor Physics in the Resonance and Thermal Regions, Vol. **1**, 91 (1966), M. I. T. Press
- Pb-67016
R. STEDMAN, L. ALMQVIST, G. NILSSON
 Phonon-Frequency Distributions and Heat Capacities of Aluminum and Lead
Phys. Rev., **162**, 549 (1967)
- Pb-67017
P. D. RANDOLPH
 Search for the Kohn Effect in Liquid Lead
 IN-1094 (1967)
- Pb-67018
R. STEDMAN, L. ALMQVIST, G. NILSSON, G. RAUNIO
 Dispersion Relations for Phonon in Lead at 80 and 300°K
Phys. Rev., **162**, 545 (1967)
- Pb-67019
P. D. RANDOLPH, W. R. MYERS
 Transverse Collective Atomic Vibrations in Liquid Lead
 IN-1115 (1967)
- Pb-67020
S. J. COCKING
 High Frequency Waves in Liquid Metals
Adv. Phys., **16**, 189 (1967)
- Pb-67021
B. DORNER, TH. PLESSER, H. STILLER
 Brillouion Scattering of Neutrons from Liquids
Discussion Faraday Soc., **43**, 160 (1967)
- Pb-68022
G. D. WIGNALL, P. A. EGELSTAFF
 The Temperature Dependence of Co-operative Modes of Motion in Liquid Lead
J. Phys. C (Proc. Phys. Soc.) Ser. 2, **1**, 519 (1968)
- Pb-68023
S. J. COCKING, P. A. EGELSTAFF
 Co-operative Modes of Motion in Liquid Lead
J. Phys. C (Proc. Phys. Soc.) Ser. 2, **1**, 507 (1968)
- Pb-68024
S. GRIMVALL, G. GRIMVALL
 X-Ray Debye Temperature for Al, Nb and Pb
Acta Cryst., **A 24**, 612 (1968)
- Pb-68025
S. J. COCKING
 Studies of the Liquid State Using the Inelastic Scattering of Slow Neutrons
 AERE-R-5867 (1968)

Pb-68026

D. M. NORTH, J. E. ENDERBY, P. A. EGELSTAFF
 The Structure Factor for Liquid Metals: II-Results for
 Liquid Zn, Tl, Pb, Sn and Bi
J. Phys. C, Ser. 2, 1, 1075 (1968)

4. 38. Bismuth

Bi-64001

J. L. YARNELL, J. L. WARREN, R. G. WENZEL, S. H.
 KOENIG
 Phonon Dispersion Curves in Bismuth
IBM J. Res. Develop., 8, 234 (1964)

Bi-67002

D. B. SMITH
 Lattice Dynamics of Bismuth
 LA-3773 (1967)

Bi-67003

S. J. COCKING

High Frequency Waves in Liquid Metals
Advances in Phys., 16, 189 (1967)

Bi-68004

D. M. NORTH, J. C. ENDERBY, P. A. EGELSTAFF
 The Structure Factor for Liquid Metals: II-Results for
 Liquid Zn, Tl, Pb, Sn and Bi
J. Phys. C, Ser., 2, 1, 1075 (1968)

4. 39. Uranium

U-66001

SAMIR F. BESHAI
 Total Cross Sections of U, UO₂ and ThO₂ for Thermal
 and Subthermal Neutrons
 AE-222 (1966)

U-66002

O. D. SIMPSON, M. S. MOORE, J. R. BERRETH
 Tabulation of the Total Neutron Cross Section of U-233
 IN-1015 (1966)

5 Alloys

5.1. Magnesium Hydride

MgH-58001

A. W. McREYNOLDS, M. S. NELKIN, A. N. ROSENBLUTH,
W. L. WHITTEMORE

Neutron Thermalization by Chemically bound Hydrogen
and Carbon

PICG, Vol. 16, 297 (1958)

5.2 Aluminium-Thorium Hydride

AlThH-61001

J. BERGSMA, J. A. GOEDKOOP

Inelastic Neutron Scattering Experiments on a Few
Metal Hydrides

ISNSL, 501 (1961)

5.3. Calcium Hydride

CaH-61001

J. BERGSMA, J. A. GOEDKOOP

Inelastic Neutron Scattering Experiments on a Few
Metal Hydrides

ISNSL, 501 (1961)

5.4. Titanium Hydride

TiH-63001

D. H. SAUNDERSON, S. J. COCKING

Studies of Proton Vibrations in γ -Titanium Hydride
ISNSL, Vol. 2, 265 (1963)

TiH-66002

B. BROCKER

Total Neutron Cross Section Measurement in Hydro-
geneous Compounds

EANDC (E) 66 "U". Progress Report on Nuclear Data
Research in the EURATOM Community, 52 (1966)

TiH-68003

S. N. PUROHIT, S. S. PAN, F. BISCHOFF, W. A. BRYYANT,
C. LAJEUNESSE, M. L. YEATER, W. E. MOORE, G. H.
KIROUAC, L. J. ESCH, N. C. FRANCIS

Inelastic Neutron Scattering in Metal Hydrides, UC and
 UO_2 , and Applications of the Scattering Law

Neutron Thermalization and Reactor Spectra, Vol. 1,
407, (1968) IAEA

TiH-67004

S. S. Pan, M. L. Yeater, W. E. Moore

Recent Low Energy Inelastic Scattering Results for
Metal Hydrides and Uranium Carbide

RPI-328-101 (1967)

5.5. Titanium-Zirconium

TiZr-63001

N. A. CHERNOPLEKOV, M. G. ZEMLYANOV, E. G. BROVMAN,
A. G. CHICKERIN

A Study of the Inelastic Scattering of Neutrons in a
Ti-Zr Alloy

ISNSL, Vol. 2, 173 (1963)

TiZr-65002

B. MOZER, K. OTNES, H. PALEVSKY

Measured Vibrational Frequency Distributions of Ni, V,
Ti and $Ti_{67}Zr_{33}$

"Lattice Dynamics" (ed. by R. F. WALLIS) 63 (1965),
Pergamon Press

5.6. Vanadium Hydride

VH-65001

R. RUBIN, J. RERETTI, G. VERDAN, W. KLEY

Inelastic Scattering of Cold Neutrons by Localized Modes
in Vanadium Hydride Systems

Phys. Letters, 14, 100 (1965)

VH-65002

W. KLEY, J. PERETTI, R. RUBIN, G. VERDAN

Hydrogen Motion in Primary Solutions of Hydrogen in
Some Transition Elements

BNL 940 (C-45) 105 (1965)

VH-68003

J. J. RUSH, H. E. FLOTOW

Vibration Spectra of Vanadium Hydride in Three Crystal
Phases by Inelastic Neutron Scattering

J. Chem. Phys., 48, 3795 (1968)

5.7. Chromium-Tungsten

CrW-65001

H. BJERRUM MÖLLER, A. R. MACKINTOSH

Observation of Resonant Lattice Modes by Inelastic
Neutron Scattering

Phys. Rev. Letters, 15, 623 (1965)

5.8. Manganese-Cobalt

MnCo-58001

A. T. STEWART, B. N. BROCKHOUSE

Vibration Spectra of Vanadium and a Mn-Co Alloy by
Neutron Spectrometry

Rev. Mod. Phys., 30, 250 (1958)

5.9. Nickel-Palladium

NiPd-62001

B. MOZER, K. OTNES, V. M. MYERS

Measurements of a Simple Defect Mode of Vibration
Phys. Rev. Letters, **8**, 278 (1962)

NiPd-63002

B. MOZER, K. OTONES
 Measurements of the Vibrational Frequency Spectrum of Nickel-Palladium Alloys
 ISNSL, Vol. 2, 167 (1963)

5. 10. Copper-Zinc

CuZn-64001

G. DOLLING, G. GILAT
 On the Temperature Dependence of Phonons in β -Brass
Solid State Commun., **2**, 79 (1964)

CuZn-65002

G. GILAT, G. DOLLING
 Normal Vibrations of β -Brass
Phys. Rev., **138**, A 1053 (1965)

CuZn-65003

G. DOLLING, G. GILAT
 Thermal Vibrations of Beta-Brass and the Order-Disorder Transition
 ISN, Vol. 1, 343 (1965)

CuZn-66004

HERBERT B. ROSENTOCK, GARY BLANKEN
 Interatomic Forces in Various Solids
Phys. Rev., **145**, 546 (1966)

5. 11. Copper-Gold

CuAu-65001

E. C. SVENSSON, B. N. BROCKHOUSE, J. M. ROWE
 "In-Band" Modes of Vibrations of a Dilute Disordered Alloys Cu(Au)
Solid State Commun., **3**, 245 (1965)

CuAu-67002

E. C. SVENSSON, B. N. BROCKHOUSE
 In-Band Modes of Vibration of a Copper-3 at. % Gold Alloy
Phys. Rev. Letters, **18**, 858 (1967)

5. 12. Zirconium Hydride

ZrH-57001

A. ANDERSON, A. W. McREYNOLDS, M. NELKIN, M. ROSENBLUTH, W. WHITMORE
 Neutron Investigation of Optical Vibration Levels in Zirconium Hydride
Phys. Rev., **108**, 1092 (1957)

ZrH-58002

A. W. McREYNOLDS, M. S. NELKIN, M. N. ROSENBLUTH, W. L. WHITEMORE
 Neutron Thermalizations by Chemically-Bound Hydrogen and Carbon
 PICG, Vol. 16, 297 (1958)

ZrH-61003

A. D. B. WOODS, B. N. BROCKHOUSE, M. SAKAMOTO, R.

N. SINCLAIR

Energy Distributions of Neutrons Scattered from Graphite, Light and Heavy Water, Ice, Zirconium Hydride Lithium Hydride, Sodium Hydride and Ammonium Chloride by the Beryllium Detector Method
 ISNSL, 487 (1961)

ZrH-61004

R. M. BRUGGER
 Slow Neutron Inelastic Scattering Measurements at MTR
 ISNSL, 277 (1961)

ZrH-62005

G. W. LEHMAN, T. WOLFRAM, R. E. De WAMES
 Axially Symmetric Model for Lattice Dynamics of Metals with Application to Cu, Al and ZrH₂
Phys. Rev., **128**, 1593 (1962)

ZrH-64006

T. SPRINGER, C. HOFMEYER, S. KORNBICHER, H. D. LEMMEL
 On the Determination of the Diffusion Constants of H₂O, Polyphenyls, ZrH_{1.92}, and D₂O by Neutron Single-Scattering Experiments
 PICG, Vol. 2, 351 (1964)

ZrH-65007

O. K. HARLING, B. R. LEONARD Jr.
 A Multiphonon Neutron Scattering Study of Hydrogen Bounding in Zirconium Hydride
 BNL-940 (C-45) 96 (1965)

ZrH-65008

SIEGFRIED KORNFIRCHLER
 Determination of the Diffusion Constants $D(E_0, T)$ and $\bar{Dv}(T)$ of Thermal Neutrons in H₂O, Phenylene, ZrH_{1.92}, and D₂O by Measurement of Scattering Angular Distribution-II. Zirconium Hydride and Heavy Water
Nukleonik, **7**, 281 (1965)

ZrH-65009

J. R. BEYSTER, J. C. YOUNG, J. M. NEIL, W. R. MOWRY
 Differential Neutron Scattering from Hydrogens Moderators
 Pulsed Neutron Research,
 Vol. 1, 407 (1965) IAEA

ZrH-65010

W. GLÄSER, G. EHRET, A. MERKEL
 Recent Measurements of the Scattering Laws of Some Hydrogenous Moderators
 ISNSL, Vol. 2, 167 (1965)

ZrH-65011

W. L. WHITEMORE
 Differential Neutron Thermalization
 GA-6483 (1965)

ZrH-66012

H. ANTUNEZ, *et al.*
 Integral Neutron Thermalization
 GA-7091 (1966)

ZrH-66013

J. U. KOPPEL
 Neutron Scattering by Hydrogenous Moderators

- GA-7055 (1966)
- ZrH-66014
B. BROCKER
Total Neutron Cross Section Measurement in Hydrogenous Compounds
EAND (E) 66 "U" (1966)
- ZrH-66015
S. N. ISHMAEV, *et al.*
A Study of the Transient Neutron Spectra in Zirconium Hydride
AEC-TR 6805 (1966)
- ZrH-66016
J. R. BEYSTER, J. M. NEILL, J. C. YOUNG
Recent Developments in Integral Neutron Thermalization
Reactor Physics in the Resonance and Thermal Regions,
Vol. 1, 151 (1966), M. I. T. Press
- ZrH-66017
JUAN U. KOPPEL
Neutron Scattering by Hydrogenous Moderators
Reactor Physics in the Resonance and Thermal Regions
Vol. 1, 3. (1966), M. I. T. Press
- ZrH-67018
F. BISCHOFF, W. A. BRYANT, L. J. ESCH, C. LAJEUNESSE,
W. E. MOORE, S. S. PAN, S. N. PUROHIT, M. L. YEATER
Epithermal Neutron Inelastic Scattering
WASH-1074, 103 (1967)
- ZrH-67019
G. W. CARRIVEAU
Single Differential Cross Section of Zirconium Hydride
GA-8345 (1967)
- ZrH-67020
S. S. PAN, M. L. YEATER, W. E. MOORE
Recent Low Energy Inelastic Scattering Results for
Metal Hydrides and Uranium Carbide
RPI-328-101 (1967)
- ZrH-68021
J. R. BEYSTER, G. M. BORGONOV, G. W. CARRIVEAU
Angular Scattering by CH_2 , $\text{ZrH}_{1.85}$ and C_6H_6 .
GA-8030 (1967)
- ZrH-68022
S. N. PUROHIT, S. S. PAN, F. BISCHOFF, W. A. BRYANT,
C. LAJEUNESSE, M. L. YEATER, W. E. MOORE, G. L.
KIROUAC, L. J. ESCH, N. C. FRANCIS
Inelastic Neutron Scattering in Metal Hydrides, UC and
 UO_2 , and Applications of the Scattering Law.
Neutron Thermalization and Reactor Spectra, Vol. 1,
407 (1968), IAEA
- ZrH-68023
I. M. THORSON
The Scattering Law for Various Reactor Materials
Neutron Thermalization and Reactor Spectra, Vol. 1,
373 (1968), IAEA
- ZrH-68024
E. L. SLAGGIE
- Multiple Scattering in Neutron Double Differential Cross Section Measurements
Neutron Thermalization and Reactor Spectra, Vol. 1,
311 (1968) IAEA
- ZrH-68025
W. GLÄSER
A Review of Scattering Law Studies for Moderators
Neutron Thermalization and Reactor Spectra, Vol. 1,
235 (1968), IAEA
- ZrH-68026
J. R. BYSTER, G. M. BORGONOV, C. W. CARRIVEAU
Angular Scattering by CH_2 , $\text{ZrH}_{1.85}$, and C_6H_6
Neutron Thermalization and Reactor Spectra, Vol. 1,
493 (1968), IAEA
- ZrH-68027
J. R. BEYSTER, G. M. BORGONOV, T. GOZANI *et al.*
Integral Neutron Thermalization
GA-8449 (1968)
- ZrH-68028
E. L. SLAGGIE
Central Force Lattice Dynamical Model for Zirconium Hydride
J. Phys. and Chem. Solids. 29, 923 (1968)
- ZrH-68029
W. GLÄSER
Studies of Inelastic Scattering of Slow Neutron by Moderators
Nukleonik, 11, 282 (1968)
- 5.13. Niobium Hydride**
- NbH-65001
W. KLEY, J. PERATTI, R. RUBIN, G. VERDAN
Hydrogen Motion in Primary Solutions of Hydrogen in Some Transition Elements
BNL 910 (C-45) 105 (1965)
- NbH-67002
F. BISCHOFF, W. A. BRYANT, L. J. ESCH, C. LAJEUNESSE,
W. E. MOORE, S. S. PAN, S. N. PURPHIT, M. L. YEATER
Epithermal Neutron Inelastic Scattering
WASH-1074, 103 (1967)
- NbH-67003
S. S. PAN, M. L. YEATER, W. E. MOORE
Recent Low Energy Inelastic Scattering Results for Metal Hydrides and Uranium Carbide
RPI-328-101 (1967)
- NbH-68004
S. N. PUROHIT, S. S. PAN, F. BISCHOFF, W. A. BRYANT,
C. LAJEUNESSE, M. L. YEATER, W. E. MOORE, G. J. KIROUAC, L. J. ESCH, N. C. FRANCIS
Inelastic Neutron Scattering in Metal Hydrides, UC and
 UO_2 , and Applications of the Scattering Law
Neutron Thermalization and Reactor Spectra, Vol. 1, 407,
(1968) IAEA

5.14. Niobium-Molybdenum

NbMo-65001

A. D. B. Woods, B. M. POWELL

Phonons in Disordered Niobium-Molybdenum Alloys

Phys. Rev. Letters, **15**, 778 (1965)

NbMo-68002

B. M. POWELL, P. MARTEL, A. D. B. Woods

Lattice Dynamics of Niobium-Molybdenum Alloys

Phys. Rev., **171**, 727 (1968)

5.15. Palladium Hydride

PdH-61001

J. BERGSMA, J. A. GOEDKOOP

Inelastic Neutron Scattering Experiments on a Few Metal Hydrides

ISNSL, 501 (1961)

PbH-65002

W. KLEY, J. PERETTI, R. RUBIN, G. VERDAN

Hydrogen Motion in Primary Solutions of Hydrogen in Some Transition Elements

BNL 940 (C-45) .105 (1965)

PdH-67003

K. SKÖLD, G. NELIN

Diffusion of Hydrogen in the Phase of Pd-H Studied by Small Energy Transfer Neutron Scattering

J. Phys. and Chem. Solids, **28**, 2369 (1967)

5.16. Cesium Hydride

CsH-67001

I. KARIMOV, M. G. ZEMLYAMOV, M. E. KOST, V. A. SOMENKOV, N. A. CHERNOPLEKOV

A Lattice-Dynamical Investigation of the Hydrides CeH₃, ThH₂ and UH_{2.7} Using Inelastic Scattering of Cold Neutrons

Soviet Phys. Solid State, **9**, 1366, (1967)

CsH-68002

I. KARIMOV, E. G. BROVMAN, M. G. ZEMLYANOV, V. A. SOMENKOV, N. A. CHERNOPLEKOV

Broadening of the Optical Branches of the Phonon Spectrum in Metal Hydrides

Soviet Phys. Solid State, **9**, 1566 (1968)

5.17. Bismuth-Zinc

BiZn-67001

P. A. EGELSTAFF, G. D. WIGNALL

Critical Inelastic Scattering of Slow Neutrons from a Binary Liquid Metal Mixture (Bi-Zn)

AERE-R 5627 (1967)

5.18. Thorium Hydride

ThH-67001

I. KARIMOV, M. G. ZEMLYMOV, M. E. KOST, V. A. SOMENKOV, N. A. CHERNOPLEKOV

A Lattice-Dynamical Investigation of the Hydrides CeH₃, ThH₂ and UH_{2.7} Using Inelastic Scattering of Cold Neutrons

Soviet Phys. Solid State, **9**, 1366, (1967)

ThH-68002

S. N. PUROHIT, S. S. PAN, F. BISCHOFF, W. A. BRYANT, C. LAJEUNESSE, M. L. YEATER, W. E. MOORE, G. J. KIROUAC, L. J. ESCH, N. C. FRANCIS

Inelastic Neutron Scattering in Metal Hydrides, UC and UO₂, and Applications of the Scattering Law

Neutron Thermalization and Reactor Spectra, Vol. 1, 407, (1968) IAEA

ThH-68003

I. KARIMOV, E. G. BROVMAN, M. G. ZEMLYANOV, V. A. SOMEKOV, N. A. CHERNOPLEKOV

Broadening of the Optical Branches of the Phonons Spectrum in Metal Hydrides

Soviet Phys. Solid State, **9**, 1566, (1968)

5.19. Uranium Hydride

UH-67001

I. KARIMOV, M. G. ZEMLYANOV, M. E. KOST, V. A. SOMENKOV, N. A. CHERNOPLEKOV

A Lattice-Dynamical Investigation of the Hydrides CeH₂, CeH₃, ThH₂ and UH_{2.7} Using Inelastic Scattering of Cold Neutrons

Soviet Phys. Solid State, **9**, 1366, (1967)

UH-68001

I. KARIMOV, E. G. BROVMAN, M. G. ZEMLYANOV, V. A. SOMENKOV, N. A. CHERNOPLEKOV

Broadening of the Optical Branches of the Phonon Spectrum of the Metal Hydrides

Soviet Phys. Solid State, **9**, 1566 (1968)

