

Edited by
Prof. Joshua Jortner,
Tel Aviv University,
Institute of Chemistry,
Ramat Aviv, Tel Aviv,
Israel, and
Prof. Neil R. Kestner,
Department of
Chemistry, Louisiana
State University,
Baton Rouge, La., USA

271 figures (including
two colors plates)
59 tables. XII, 493 pages
1973. Cloth DM 107,50
US \$44.10*

ISBN 3-540-06310-2

Electrons in Fluids

The Nature of Metal-Ammonia Solutions

Contents

N. R. Kestner

Theory of Electrons in Polar Fluids.

J. J. Lagowski

Metal-Ammonia Solutions: The Dilute Region.

J. H. Roberts, J. J. La-
gowski: The Effect of
Electrolytes on the Hydro-
gen-Bonded Structure
of Liquid Ammonia.

C. Lambert: Magnetic
Relaxation Properties of
Dilute Solutions of Sodium
in Liquid Ammonia.

J. Belloni, E. Saito:
Chemical Equilibria
between Anions and the
Ammoniated Electron.

J. L. Dye

Metal Solutions in Amines and Ethers.

S. Nehari, K. Bar-Eli:
Extinction Coefficients
of Solutions of Alkali
Metals in Amines.

Ultrafast Optical Processes.

P. Delahay: Quasi-Free
Electrons in Polar Liquids.
E. Saito: Spectra of the
Ammoniated Electron in

the Presence of Amide.
B. L. Smith, W. H. Koehler:
Raman Spectroscopy of
Metal-Ammonia
Solutions.

M. G. DeBacker, P. F.
Rusch, B. DeBettignies,
G. Lepoutre: Raman
Spectra of Dilute Metal-
Ammonia Solutions.
P. F. Rusch, J. J. Lagowski:
Metal-Ammonia Solu-
tions VIII. Infrared
Spectroscopy of the
Solvent.

G. Lepoutre

Metal-Ammonia Solu- tions: Transition Range.

P. Damay: Thermodynam-
ics and Critical Phenom-
ena in Metal-Ammonia
Solutions.
J. P. Lelieur, P. Damay,
G. Lepoutre: Transport
Properties of Lithium-
Ammonia Solutions in the
Intermediate Concentra-
tion Range.

A. N. Garroway, R. M.
Cotts: NMR Measure-
ments of Self-Diffusion in
Lithium-Ammonia and
Sodium-Ammonia
Solutions.

K. Ichikawa, J. C. Thomp-
son: Cell e.m.f.'s in Me-
tal-Ammonia Solutions.
P. D. Schettler, C. L. van
Antwerp, J. A. Hamilton,
J. E. Thilly, J. D. Spear:
Impedance Behavior of

Metal-Ammonia Solid
Metal Interface.
D. E. Bowen: Absorption
of Ultrasound in Metal-
Ammonia Solutions.

M. H. Cohen

The Electronic Structures of Disordered Materials.

J. C. Thompson: Concen-
trated M-NH₃ Solutions:
A Review.
J. P. Lelieur: Nuclear
Magnetic Resonance
Studies of Cesium-
Ammonia Solutions.
K. G. Breitschwerdt,
H. Radscheit: Conduc-
tivity of Concentrated
Metal-Ammonia Solu-
tions in the Frequency
Range 0-70 GHz.

T. David, W. Glaunsinger,
S. Zolotov, M. J. Sienko

Strange Magnetic Behavior and Phase Relations of Metal- Ammonia Compounds.

J. V. Acrivos, S. F. Meyer,
T. H. Geballe: On Super-
conducting Metal-
Ammonia Complexes.

F. Hensel

Metallic Vapors.

U. Even, J. Jortner: Metal-
Nonmetal Transition in
Expanded Liquid Mercury.
A. Gedanken, B. Raz,
U. Even, J. Jortner:

Metal-Nonmetal Transi-
tion and Exciton
Screening.

H. T. Davis, L. D. Schmidt,
R. G. Brown

Mobility Studies of Excess Electrons in Nonpolar Hydrocarbons.

B. Raz, J. Jortner: Excita-
tions in Liquids and the
Energy of the Quasi-Free
Electron State.

I. Webman, J. Jortner:
Electron Localization
in Dense He Gas.

A. Gaathon, J. Jortner:
Excess Electron States
in Dense Polar Vapors.

L. M. Dorfman, F. Y. Jou
**Optical Absorption Spec-
trum of the Solvated
Electron in Ethers and in
Binary Liquid Systems.**

J. Belloni, E. Saito: Radio-
lytic and Photolytic
Formation of Stable e_{am}
in Amide Solutions.

R. R. Dewald, R. L. Jones,
H. Boll: Kinetic Studies
of Reactions Involving
the Ammoniated Electron.

N. R. Kestner, J. Logan:
Comments on Electron
Transfer Reactions.

U. Schindewolf: "Spin Off"
of Solvated Electron
Research.

Subject Index.
Color Plates.

* Prices are subject to
change without notice

Springer-Verlag
Berlin Heidelberg New York

München Johannesburg London Madrid New Delhi Paris Rio de Janeiro
Sydney Tokyo Utrecht Wien

