

Sachverzeichnis

Das Sachverzeichnis enthält Originalarbeiten, Notizen (N) und Berichte (B)

Adsorption und Oberflächenreaktionen

- Adsorption of Hydrogen on a Nickel (100) Surface. K. Christmann 22
- Formation and Decomposition of Nitrides on Iron Surfaces. G. Ertl, M. Huber, and N. Thiele 30
- Relationship Between New Structural Data on Clinoptilolite and its Behaviour in Ion-Exchange and Heating. I. M. Galabova (N) 248
- Investigation by X-Ray Absorption Spectroscopy of Platinum Clusters Supported on Zeolites. P. Gallezot, R. Weber, R. A. Dalla Betta, and M. Boudart 40
- Theoretical Study of Linear NiCO and CuCO and its Implication to Adsorption. H. Itoh and A. B. Kunz 114
- Investigations on the Fine Structure of the Adsorption Heat-Coating Curve Obtained by Covering Silver with Aromatic Hydrocarbons (In German). A. Knappwost, M. Raschti, and Ü. Ankara 76
- The Langmuir-Hinshelwood Reaction between Oxygen and CO at Ir(111) Surfaces. J. Küppers and A. Plagge 81
- Chemisorption on a FCC Metal Surface: Electronic Structure of Ordered Overlayers. K. Masuda 600
- Mechanism of Ammonia Decomposition on Tungsten; NH₃ and ND₃ Isotope Effect. H. Shindo, C. Egawa, T. Onishi, and K. Tamaru 96

Atomphysik und -Spektren

- Broadening Effects of the 632.8 nm NeI Line Due to a Helium-Neon Mixture. A. Bielski, H. Darowicki, and J. Szudy (N) 519
- Adiabatic Potentials of the Alkali-Rare Gas Atom Pairs. E. Czuchaj and J. Sienkiewicz 694
- Approximate Classical Trajectories and the Adiabatic Theory of the Stark Broadening of Neutral-Atom Lines. M. S. Dimitrijević and P. Grujić (N) 1362
- Experimental Profiles of the Balmer Line H_β Emitted from an Afterglow Plasma without and with a Superposed Magnetic Field up to 10 Tesla. H. W. Drawin and J. Ramette 1041
- The Profile of the HeI 4 ³D, ³F—2 ³P (λ=447.15 nm; λ=447.0 nm) Spectral Line Emitted from a Low-Pressure Afterglow Plasma Submitted to a Magnetic Field of 10 Tesla. H. W. Drawin and J. Ramette 1051
- Experimental Study of Balmer-α Stark Broadening. H. Ehrich 188
- The Perturbed Hyperfine Structure of the 3 s² 3 d ²D- and 3 s² 4 d ²D-States of Al I. B. Falkenburg and P. Zimmermann (N) 1249
- MMM Profiles of HeI Lines: Ion Dynamics Effect. A. Mazure, C. Goldbach, and G. Nollez (N) 773
- The Role of Hydrogen Molecular Lines in the Vicinity of H_β. A. Piel and H. Richter (N) 516
- The Influence of Molecular Transitions on the Spectrum of the Helium Line at λ=447.15 nm in a Low-Pressure Discharge. F. Pinnekamp 529
- Isoelectronic Changes in the Core Radius of Fe³⁺ and Ru³⁺ Like Ions. C. V. R. Rao and K. D. Sen (N) 1253
- Hydrogen Stark Broadening by Ion Impacts on Moving Emitters. J. Seidel 1385
- Isoelectronic Changes in the Behaviour of Nonrelativistic Electron Density Near the Nucleus in Free Ions. K. D. Sen (N) 525
- Orbital Binding Energies within the Statistical Exchange Approximation: Ne and Ar Isoelectronic Series. K. D. Sen (N) 901
- Experimental Stark Profile Determination of Some Plasma Broadened He I- and He II-Lines. H. Soltwisch and H. J. Kusch 300
- Diffusion, Elektro- und Thermodiffusion in Kondensaten**
- Cation Mobilities, Including Isotope Effects, for Electromigration in Molten Mixtures of Potassium and Rubidium Nitrate. A. Ekhed and A. Lundén 1207
- Mechanism of CaMoO₄ Formation in the Solid State from CaO and MoO₃. G. Flor, V. Berbenni, V. Massarotti, R. Riccardi, and E. V. Tkachenko (N) 394
- Characterization of Silica (Aerosil) Hydrosols by Photon Correlation Spectroscopy (In German). E. Killmann, J. Eisenlauer, and P. Kaniut 68
- Electrotransport Experiments with Epitaxial Gold Films (In German). W. Kleinn and H. Hübner 1196
- Chalcogen Interdiffusion in the System Pb(S, Se). V. Leute, H. Böttner, and H. Schmidtke 89
- High-Dilution Diffusion of K⁺, Rb⁺, Cs⁺, and Tl⁺ in the Molten System (Li-K)NO₃ Studied by Wave-Front-Shearing Interferometry. O. Odawara, I. Okada, and K. Kawamura 504
- Internal Cation Mobilities in the Molten Systems (Li-Rb)NO₃ and (Li-Cs)NO₃. I. Okada, R. Takagi, and K. Kawamura 498
- Crystalline Oxide Solid Solutions in Oxygen Potential Gradients. H. Schmalzried, W. Laqua, and P. L. Lin 192
- Dünne Schichten, Membranen**
- Planar Lipid Bilayers as Light Guides. H. P. Braun, R. Herrmann, and M. E. Michel-Beyerle 1436
- Structure and Properties of Vacuum-Deposited Cadmium Thin Films. N. C. Halder 176
- Alignment and Opening of Giant Lecithin Vesicles by Electric Fields. W. Harbich and W. Helfrich 1063
- Elektrodynamik**
- Blackbody Radiation in the Rectangular Wave Guide. W. Eckhardt 292
- Elektronenbeugung**
- Gas Electron Diffraction Study of the Molecular Structure of Di-2-pyridyl Sulphide. B. Rozsondai, I. Hargittai, and G. C. Pappalardo 752

- The Molecular Structure of 2-Methyloxacyclobutane, as Studied by Electron Diffraction. . . . G. Schultz and M. Bartók 1130
- LEED Intensity Measurement by Photographic Method with Digital Image Processing. . . . K. Ueda, G. Lehmpfuhl, and E. Reuber (N) 648
- Elektronenleitung**
- Properties of $[N,N'$ -di(n-propyl)-4,4'-bipyridylum] $^{2+}$ -(7,7,8,8-Tetracyanoquino-dimethane) $_4^{2-}$ G. J. Ashwell, I. Diaconu, D. D. Eley, S. C. Wallwork, and M. R. Willis 1
- Synthesis and Properties of a New Kind of One-Dimensional Conductors. 1. General Aspects. . . . M. Hanack, F. F. Seelig, and J. Strähle 983
- Synthesis and Properties of a New Kind of One-Dimensional Conductors. 2. Extended Hückel Calculations on the Energy Band Structure. . . . F. F. Seelig 986
- Lattice Vibrations and Ideal Electrical Resistivity of Noble Metals. . . . B. P. Singh and M. P. Hemkar 310
- On the Radiative Recombination Probability B in Intrinsic Silicon (In German). . . . Th. Wasserrab (N) 656
- Elektronenmikroskopie**
- Oblique Illumination Stereoscopy in the Shadow Electron Microscope. . . . W. C. T. Dowell (N) 117
- Elektronenspektroskopie**
- UPS Spectra of Cis and Trans 1-Phenyl-2-(4-Pyridyl) Cyclopropanes. A Comparison with Charge Transfer and Protonation Data. . . . G. Distefano, A. Modelli, and V. Mancini (N) 245
- Gas Phase UPS Investigation of *Trans-Azobenzenes*. . . . S. Millefiori, A. Millefiori, S. Pignataro, G. Distefano, and F. P. Colonna 1496
- Felddesorption**
- Appearance Potentials of Field Desorbed Silver Ions. . . . E. Hummel, M. Domke, and J. H. Block 46
- Festkörper**
- IR-Active Phonons of Boron and Boron Carbide. . . . H. Binnenbruck and H. Werheit 787
- Phase Diagrams of $(NH_4)_2M(X)_2$ and $(ND_4)_2M(X)_2$ with $M=Ti, Rb$ or Cs and $X=Cl$ or Br (In German). . . . P. Brauer 862
- Solid State Transitions in Alkali Alkanoates: Diffractometric and Conductometric Measurements on Lithium, Sodium, and Potassium Propanoates. . . . A. Cingolani, G. Spinolo, and M. Sanesi 575
- Electrochemical and Specific Heat Measurements on Tellurium-Halogen Systems. . . . J. Haag, U. v. Alpen, E. Gmelin, and A. Rabenau 969
- High Temperature Solid State Chemistry of Rare Earth Compounds with Valence Instability: Non-stoichiometric $TmSe$ and Alloys (In German). . . . E. Kaldis, B. Fritzler, and W. Peteler 55
- An Analysis of Lattice Dynamical Angular Force Models for Body Centered Cubic Metals. . . . R. N. Khanna and R. P. S. Rathore 721
- Electroelastic Effect in Tourmaline. . . . E. Kittinger, K. Seil, and J. Tichý 1352
- Dispersion of Coupled Waves by the Stimulated Raman-Effect in Simple Case of Cubic Piezoelectric Crystals (In German). . . . L. Merten and J. Wenk 126
- Dispersion of Coupled Waves of Stimulated Raman-Effect with Regard to Dielectric Dispersion (In German). . . . L. Merten and J. Wenk 1035
- Influence of Relaxing Defects on the Paraelectric-Ferroelectric Phase Transitions of Rochelle Salt. . . . J. Petersson 538
- Solid State Electrochemical Study of Phase Equilibria and Thermodynamics of the Ternary System $Y-Fe-O$ at Elevated Temperatures. . . . W. Piekarczyk, W. Weppner, and A. Rabenau 430
- Structural Investigation of Bond-Isomeric Hexakis (thiocyanato-isothiocyanato) Osmates (III) from Os LIII-edge EXAFS. . . . P. Rabe, G. Tolkiehn, A. Werner, and R. Haensel 1528
- Lattice Dynamics and Thermal Expansion of Ruthenium. . . . R. Ramji Rao and J. V. S. S. Narayana Murthy 724
- Lattice Dynamics and Thermal Expansion of Thulium. . . . R. Ramji Rao and A. Rajput 200
- On the Extremely High Thermodynamic Stability of Pd-Th Alloys (In German). . . . H.-J. Schaller 464
- Solid State Transitions in Alkali Alkanoates: Diffractometric and Conductometric Measurements on Rubidium and Cesium Propanoates. . . . G. Spinolo, A. Cingolani, and M. Sanesi 1212
- Channelling Effects in Electron Induced X-Ray Emission from Diatomic Crystals. . . . J. Taftø 452
- Polarized Crystal Absorption Spectra of Pd(II) and Pt(II) Tetrahalo and Tetrathiocyanato Complexes. . . . W. Tuszynski and G. Gliemann 211
- On the Electronic Structure of Metal Hydrides I: Exposition of a many-electron theory. . . . F. Wahl and G. Baumann 1373
- Flüssige Kristalle**
- Evidence for Polymorphism within the So-called "Blue Phase" of Cholesteric Esters. II. Selective Reflection and Optical Rotatory Dispersion. . . . K. Bergmann, P. Pollmann, G. Scherer, and H. Stegemeyer (N) 253
- Evidence for Polymorphism within the So-called "Blue Phase" of Cholesteric Esters. I. Calorimetric and Microscopic Measurements. . . . K. Bergmann and H. Stegemeyer (N) 251
- Evidence for Polymorphism within the So-called "Blue Phase" of Cholesteric Esters. IV. Temperature and Angular Dependence of Selective Reflection. . . . K. Bergmann and H. Stegemeyer (N) 1031
- Temperature Dependence of the Induced Helical Pitch of a Nematic Phase Using Several Chiral Additives (In German). . . . A. Göbl-Wunsch and G. Heppke 594
- Deuterium Relaxation in Specifically Labeled Lecithin-Bilayers. . . . A. Peters and R. Kimmich 950
- Evidence for Polymorphism within the So-called "Blue Phase" of Cholesteric Esters. III. The Circular Dichroism of the Blue Phase at High Pressures. . . . P. Pollmann and G. Scherer (N) 255
- NMR Pulsed Field Gradient Study of Self-Diffusion in the Isotropic Phase of the Liquid Crystals MBBA and EBBA. . . . G. Rollmann, K. F. Reinhart, and F. Noack 961
- Influence of the Nematic Order on the Fluorescence of Perylene and 4-dimethyl-amino-4'-nitrostilbene (In German). . . . G. Ullrich 799

The Temperature Dependence of Absorption and Fluorescence of Tetracene and Perylene/Tetracene in Liquid Crystals (In German).

G. Ullrich and A. Schmillen 1301
On the Odd-Even Effect in the Helix of Non-Sterol Cholesterogens.

B. W. van der Meer and G. Vertogen (N) 1359
Torsional Shear Flow of Nematic and Cholesteric Liquid Crystals. Part I: Nematic Phase. J. Wahl 818

Flüssigkeiten

The Specific Heat of the Second Relaxation-Step of Acetic Acid (In German). A. Asenbaum 207
A Molecular Dynamics Study of Aqueous Solutions. First Results for NaCl Solution with a Central Force Model for Water.

P. Bopp, W. Dietz, and K. Heinzinger 1424
The Pair Correlation Function of the Liquid-Vapour Interface: A Monte Carlo Calculation.

B. Borštnik and A. Azman 1236
Surface Tension of Water. The Fowler Model.

B. Borštnik, D. Janežič, and A. Azman 1239
Raman Spectra of the System $\text{PCl}_5\text{-SnCl}_4$ (In German). W. Brockner and A. F. Demiray 976

Infrared Absorption of Pure Dichloromethane Measured up to High Pressures and Temperatures (In German). . . M. Buback, E. U. Franck und H. Lendle 1489
On the Application of Neutron Small Angle Scattering to the Study of Fluctuations Near the Liquid-liquid Critical Point. . . P. Damay and P. Chieux 804

An Electromotive-Force Study of the Activity of Aluminium in Al-Ga, Al-Ge, and Al-Ga-Ge Systems. H. Eslami, J. de Franceschi, M. Gambino, and J. P. Bros 810
Structure of Si-, Ge-, Sn-, and Pb-melts (In German). J. P. Gabathuler and S. Steeb 1314

Structure of Aluminium-Silicon-Melts (In German). J.-P. Gabathuler, S. Steeb, and P. Lamparter 1305

Enthalpies of Mixing for the Liquid System Formic Acid + Acetic Acid. R. Haase, H.-J. Jansen, K. Puder, and B. Winter (N) 659

Self-Association of Cholesterol in Carbon Tetrachloride. M. Kunst, D. van Duijn, and P. Bordewijk 369

Miscibility Gaps in Fused Salts. Note X. The Reciprocal Ternary System K, Li/Br, F. C. Margheritis, G. Flor, and C. Sinistri 836

A Double Hard Sphere Model of Liquid Semi-Metals: Applications to Bismuth and Tin. B. R. Orton (N) 1547

Pair and Triplet Distribution Functions of Molten KCl from an MD-Simulation. L. Schäfer and A. Klemm 993

Solubilities of Silver and Copper in Their Molten Halide Mixtures $\text{AgCl}_x\text{Br}_{1-x}$ and $\text{CuCl}_x\text{Br}_{1-x}$. E. Schuster, A. F. Schwind, R. Vötsch, and K. G. Weil 1203

The Conductance of Tetraalkylammonium Iodides in Aqueous Proline and Hydroxyproline Solutions. B. Sesta, C. La Mesa, C. Cantale, and M. Vincenzini 1225

A Molecular Dynamics Study of Aqueous Solutions. VIII. Improved Simulation and Structural Properties of a NH_4Cl Solution. Gy. I. Szász and K. Heinzinger 840

Molecular Dynamics Study of Aqueous Solutions. IX. Dynamical Properties of an NH_4Cl Solution. Gy. I. Szász, W. O. Riede, and K. Heinzinger 1083

Measurement of the Hypersonic Velocity in the Molten Salts NaCl and KCl. L. M. Torell and H. E. G. Knappe (N) 899

Electrical Resistivity and Phase Separation in Dilute Liquid Alloys of Sodium in Selenium.

C. van der Marel and W. van der Lugt 832
Heat of Mixing and Activities in Liquid Al-Sn Alloys. Y. Waseda, K. T. Jacob, and S. Tamaki 320

Investigation of Mg-Bi Melts by Means of X-ray- and Neutron Diffraction. M. Weber, S. Steeb, and P. Lamparter 1398

Gaskinetik

Waldmann-Snider Collision Integrals for Mixtures of Polyatomic Gases. Exact and Approximate Relations. W. E. Köhler and G. W. 't Hooft 1255

Boundary Conditions for the Distribution Function and for the Moments of a Gas at a Moving Wall. H. Vestner and L. Waldmann 269

Hochfrequenzspektroskopie

a) Elektronenspinresonanz

ESR-Relaxation of FeCl_4^- -Complexes in Dilute Organic Solvents (In German). W. Dietz 1164

A Simple and Convenient EPR Standard for Determination of g -Factors and Spin Concentrations. B. Schmitz, M. Jakubith, and G. Lehmann (N) 906

b) Kernresonanz

Nuclear Magnetic Resonance in Solid Zinc.

H. Herberg, J. Abart, and J. Voitländer (N) 1021

$^{25}\text{Mg}^{2+}$ Nuclear Magnetic Relaxation in Aqueous Solution. M. Holz, S. Günther, O. Lutz, A. Nolle, and P.-G. Schrader 944

NMR Studies of Molecular Motions in Phenylene Sulfides (In German). J. Jurga, H. Eckert, and W. Müller-Warmuth 1216

Investigation of the H^1 Spin-Lattice Relaxation Times of Some Ammonium Compounds. F. Köksal (N) 239

On a T_1 Study of Molecular Motion in Some Tetra Substituted Ammonium Halides. F. Köksal 1296

Calculation of the Knight Shift in Palladium. R. Krieger and J. Voitländer (N) 523

Proton Magnetic Resonance Study of Molecular Motion in Solid Silver Sulfate Tetrammine, $\text{Ag}_2\text{SO}_4 \cdot 4 \text{NH}_3$. N. Kummer, J. L. Ragle, N. Weiden, and A. Weiss 333

Nuclear Quadrupole Coupling in 5-Membered Ring Oxygen and Sulphur Heterocyclic Compounds; Studies by Nuclear Quadrupole Resonance and Ab Initio Molecular Orbital Calculations. M. Redshaw, M. H. Palmer, and R. H. Findlay 220

On the Evaluation of the Specific Mass Shift in the Ground States of Members of the He Isoelectronic Series. S. Saha and S. Sengupta 1538

Spin-Lattice-Relaxation Time T_1 of Nitrile Carbon-atoms (In German). H. Sterk, J. Kalcher, G. Kollenz, and H. Waldenberger 375

^{13}C -NMR Chemical Shift of Phenylsubstituted Polycyclic Hydrocarbons (In German). W. Storek, J. Sauer, and R. Stösser 1334

On the Convergence of the Calculated Spin-spin Coupling Constant of HD. H. P. Trivedi 1158

Investigation of Methyl Reorientations in 1,4-Dimethoxy-2,6-dimethylbenzene by NMR and Inelastic Neutron Scattering.

R. A. Wind, W. M. M. J. Bovée, J. C. F. Kupers, J. Smidt, and Chr. Steenbergen

631

c) Mikrowellenspektroskopie

Investigation of T_2 Relaxation with a Microwave Pulse Spectrometer. Rotational Lines of Formaldehyde and Sulfur dioxide.

G. Bestmann, H. Dreizler, and H. Mäder

1330

The Rotational Zeeman Effect of Methyl- and Silylbromide. K.-F. Dössel and D. H. Sutter

469

The Microwave Spectrum of Silylthiocyanate, SiH_3NCS . III. The Rotational Zeeman Effect.

K.-F. Dössel and D. H. Sutter

482

A Contribution to the Microwave Double Resonance Technique and Measurements of Collision Induced Transitions.

H. Dreizler, W. Schrepp, and R. Schwarz

571

Time-resolved Microwave Double Resonance in Four Level Systems: H_2CO P. Glorieux

609

A Contribution to the Structure of N-nitrosodimethylamine Microwave Spectra of Isotopic Substituted Forms. A. Guarnieri and R. Nicolaisen

620

The Microwave Spectra of three Isotopic Species of $\text{CH}_2\text{Cl}_2 \equiv \text{CCl}_2$ H. Günther and W. Zeil

1243

The Microwave Spectrum of Fluoroacetylene in Ground and Vibrationally Excited States and Some Laser Enhancement Effects.

H. Jones and H. D. Rudolph

340

The Microwave Spectroscopy and the Structures of Methyl-di-chloro-Silane (In German).

H.-G. Kraft, B. Haas, and W. Zeil

1458

Investigation of T_1 Relaxation for OCS Rotational Transitions by Self- and Nonpolar Foreign Gas Collision. H. Mäder

1170

The Measurement of Rotational Relaxation Time T_2 for $\text{CH}_3\text{C}^{15}\text{N}$ Self- and Foreign Gas Collisions.

H. Mäder, H. Bomsdorf, and U. Andresen

850

Investigation of T_1 and T_2 Relaxation for Ethylene Oxide Rotational Transitions.

H. Mäder, W. Lalowski, and R. Schwarz

1181

A Contribution to the Stark Spectroscopy at Low Microwave Frequencies.

W. Schrepp and H. Dreizler (N)

903

A Contribution to the Investigation of T_2 Relaxation with a Microwave Pulse Spectrometer. Rotational Lines of Ethylene Oxide.

W. Schrepp, G. Bestmann, and H. Dreizler

1467

Ionisation und Reaktion in Gasen

Electron Energy Distribution Functions of Hydrogen: The Effect of Superelastic Vibrational Collisions and of the Dissociation Process.

M. Capitelli and M. Dilonardo

585

On a Field-Theoretic Formulation of Scaling Laws in Molecular Scattering. E. Ficocelli Varracchio (N)

897

Positron Annihilation in Noble Gas Mixtures.

P. S. Grover (N)

391

Analytical Approximate Calculation for Electron Impact Ionization Generated Ion Charge State Densities (In German). G. Hertenberger and H. Zeidl

691

Cross Sections for the Collisions of Alkaline Earth Atoms in the ^3P Excited State with Chlorine Molecule. A. Kowalski

459

Rate Coefficients and Product Ion Distributions for Reactions of $\text{CO}_2 \cdot \text{CO}_2^+$ Ions with Neutral Molecules at 300 K. A. B. Rakshit and P. Warneck

1410

Ionisierte Gase

An Investigation of the Positive Column of a Hollow Cathode Arc in a Magnetic Field. Part I.

F. Boeschoten, R. Komen, and A. F. C. Sens

1009

Constitutive Relations for Moving Plasmas.

H. Hebenstreit

147

Calculation of Covariant Dispersion Equations for Moving Plasmas. H. Hebenstreit

155

Polarization Relations and Dispersion Equations for Anisotropic Moving Media.

H. Hebenstreit and K. Suchy

1147

An Investigation of the Positive Column of a Hollow Cathode Arc in a Magnetic Field. Part II.

P. A. E. M. Janssen and F. Boeschoten

1022

Temporal Development and Properties of an Overdense Plasma Produced by High Power Microwaves in a Coaxial Discharge Device. B. Kampmann

414

Generation of a Steady-State Overdense Plasma by Microwaves near the Dipole Resonance of a Coaxial Discharge Device. B. Kampmann

423

Tokamak Fuelling with Pellets: Effect of Transport Phenomena on the Injection Requirements.

L. L. Lengyel

957

Three-Dimensional Elliptical Centered MHD Equilibria. D. Lortz and J. Nührenberg

167

Plasmaparameters in the Initial Stages of Plasmas Produced by a Q-switch Laser in Nitrogen (In German). I. Meyer and P. Stritzke

441

Determination of the Plasmaparameters and the Suprathermal Microfields in a Critical Velocity Rotating Plasma. E. Möbius, A. Piel, and G. Himmel

405

Absorption of Magnetoacoustic Waves in a High Beta Plasma (In German).

F. Moser, E. Räuchle, E. Schneider, and P. G. Schüller

1190

Radiation Pressure Dominated Plasma Flow.

P. Mulser and G. Spindler

1059

An Application of Karman's Energy Transfer Process in Hydromagnetic Turbulence. G. C. Pramanik

731

A Study of a Weakly Ionized Rotating Plasma.

M. M. B. Wijnakker, E. H. A. Granneman, and J. Kistemaker

672

Kernphysik und Elementarteilchen

Binding Energies in Zr from (d, p) and (d, t) Reactions. T. Borello-Lewin and O. Dietzsch (N)

1536

Evidence of a New Decay Mode of ^9B .

P. Mandal, D. K. Bhattacharya, M. Saha, and P. K. Sen (N)

242

A New Determination of the Half-Life of ^{194}Hg .

H.-J. Probst, C. Alderliesten, and P. Jahn (N)

387

Kosmo- und Geochemie

Silicon Compounds in the Jupiter Atmosphere.

G. Howland, P. Harteck, and R. R. Reeves, Jr. (N)

1541

On the Radioactivity of Fly Ashes from Coal Power Plants. C. Papastefanou and St. Charalambous

533

Ortho- and Parahydrogen in Interstellar Material.

R. R. Reeves and P. Harteck

163

$\delta^{13}\text{C}$ Record in an Undisturbed Forest Soil.

G. H. Schleser, R. Pohling, and B. Meyer (N)

119

Lumineszenz

Dynamics of Energy Transfer by Singlet Excitons in Naphthalene Crystals as Studied by Time-Resolved Spectroscopy.

H. Auweter, A. Braun, U. Mayer, and D. Schmid 761
Dipole Moments, Polarizabilities, and the Fluorescence Behaviour of 4-(9-anthryl)-N,N-dimethyl-aniline.

W. Baumann, F. Petzke, and K.-D. Loosen 1070
On the Luminescence of Aromatic Compounds with Heavy Atom Substituents in Different Bonding Situations (In German).

G.-P. Blümer and M. Zander (N) 909
Optical and ODMR Investigations of the Lowest Excited Triplet State of Dinaphtho-(2',3':1.2); (2'',3'':6.7)-pyrene.

Chr. Bräuchle, H. Kabza, and J. Voithländer 6
A Concept to Relate the ZFS Parameter *D* of Aromatic Hydrocarbons to Molecular and Electronic Structure.

Chr. Bräuchle, H. Kabza, and J. Voithländer (N) 265
Monte-Carlo Simulation of the Fluorescence Decay of Anthracene Single Crystals (In German).

P. and S. Ganz (N) 653
Theoretical and Experimental Investigation on Dipole Moment of Synthetized γ -Base in the Ground and Excited States.

I. Gryczyński, Ch. Jung, A. Kowski, S. Paszyc, and B. Skalski 172
The Vibronic Structure of Shpolskii Spectra of Anthracene, 9-Methyl- and 9,10-Dimethylantracene in *n*-Hexane at 77 K. I. Fluorescence (In German).

Ch. Jung, A. Kowski, and M. I. Zukowska 105
The Vibronic Structure of Shpolskii Spectra of Anthracene, 9-Methyl- and 9,10-Dimethylantracene in *n*-Hexane at 77 K. II. Absorption (In German).

Ch. Jung, A. Kowski, and M. I. Zukowska 557
The Anisotropic Fluorescence of 4-isocyanate-4'-dimethylamino-trans-stilbene in Liquid Solutions (In German). A. Kowski and M. Alicka (N) 1371
Thermal Motion of Prolate Luminescent Molecules in Solvents with Different Viscosities.

A. Kowski, J. Kamiński, and J. Kukielski 702
The Anisotropic Fluorescence of Prolate Molecules in Solutions (In German).

A. Kowski, J. Kukielski, and J. Kamiński 1066
Energy Transfer Among Like and Unlike Molecules in Solution. IV. Fluorescence Quenching of *p*-Terphenyl by 4-Aminobenzophenon in Solvents of Different Dielectric Constants (In German).

A. Kowski and M. Stoń 708
The Influence of Detergents on the Bleaching Process, Laser Properties of Rhodamine 6G and B in Aqueous Solution. Z. Konefal

On the Formation and Conversion of "Blue" and "Green" Centres in Gold-Activated Zinc Sulphide (In German). K. Kynev and V. Kuk (N) 262
Triplet State Properties of Binary Mixed Crystals of Dibenzofuran and Fluorene.

D. Schweitzer and H. Zimmermann 1185
Further Study on the Forms of Umbelliferone in Excited State. Part II. . . . S. Taszner and J. Grzywacz 548
Heavy Atom- and Deuterium Isotope Effect in Bis-(Phenylethynyl)-Mercury.

G. Weinzierl, J. Friedrich, and R. Griebel 493
Luminescence Spectra of Trans-Bis(N-Alkylimino-diacetato)-Chromate(III) Complexes.

R. Wernicke, H.-H. Schmidtke, and P. E. Hoggard 1099

Luminescent Heterocycles. IX. pH Dependent Fluorescence Spectra of Chromone, 2-Methylchromone and 7-Hydroxy-2-Methylchromone[1].

O. S. Wolfbeis and A. Knierzinger 510
A Comparative Study on the Influence of 25 Main Group and Transition Element Chlorides as External Spin-Orbit Coupling Perturbors on the Luminescence Behaviour of Coronene (In German).

M. Zander (N) 1143

Magnetismus

High Temperature Magnetic Susceptibility of Light Rare-Earth Tungstates. . . N. Dar and H. B. Lal (N) 892
Ferromagnetic State of a Model Chain System.

M. Kertész, J. Koller, and A. Ažman (N) 527
Magnetic Properties of the Normal-Temperature Form of CsTmO₂ (In German). W. Urland 997

On the Magnetic Behaviour of Cs₂MYbF₆ (M=Na, K, Rb) and Cs₂NaYbBr₆ (In German). . . W. Urland 1507
Electric-field Dependence of Nuclear Magnetic Shielding and Susceptibility of Hydrogen and Hydrogen Fluoride Molecules. . . M. Žaucer and A. Ažman 1279

Mössbauer-Effekt

Mössbauer Studies on some Europium(III) β -Diketonate Complexes. . . O. K. Medhi and U. Agarwala 625

Molekülbau und -dynamik

Interaction of the Quinoline Derivatives with Coenzyme Q₁₀. . . S. Al-Khuzzai, E. M. Al-Rufaie, S. M. Khalil, and M. Shanshal 1003

Ground State Wave Function and Superexchange Interaction in CuCl₂·2NC₅H₅. . . G. Amoretti, V. Varacca, and A. Vera 353

Condensed Aromatics. Part II. The Five-Parameter Approximation of the In-Plane Force Field of Molecular Vibrations.

A. Bakke, B. N. Cyvin, J. C. Whitmer, S. J. Cyvin, J. E. Gustavsen, and P. Klæboe 579

Condensed Aromatics. Part V. In-Plane Molecular Vibrations of Naphthalene and Mean Amplitudes for Nonbonded CC Distances in General. . . S. J. Cyvin, J. Brunvoll, B. N. Cyvin, and V. S. Mastryukov 1512

Condensed Aromatics. Part III. In-Plane Molecular Vibrations of Pyrene.

S. J. Cyvin, B. N. Cyvin, J. Brunvoll, J. C. Whitmer, P. Klæboe, and J. E. Gustavsen 876

Condensed Aromatics. Part IV. The Five-Parameter Approximation and Mean Amplitudes of Vibration.

S. J. Cyvin, B. N. Cyvin, and J. Brunvoll 887

Interpretation of Hückel-Parameters by Means of a Mapping Concept: Consequences in the Discussion of Charge Transfer Effects in Three Centre Systems (In German). . . R. Brüggemann and J. Voithländer 13

A Discription of Hückel-Parameters by Use of Characterizing Indices (In German).

R. Brüggemann and J. Voithländer 1463
On the Unique Determination of the Completely Reduced Representation of the Symmetry Group for Non-Rigid Molecules. G. Dellepiane 1230

- Molecular Vibration Analysis of $\text{Ti}_2\text{Cl}_{10}^{2-}$, Ti_2Cl_9^- and TiCl_5^- (In German).
A. F. Demiray, W. Brockner, B. N. Cyvin, and S. J. Cyvin 362
- A Generalized Omega-Technique for Molecular Orbital Calculations.
F. M. Fernández and E. A. Castro (N) 1365
- Molecular Orbital Calculations on Penta Coordinated Ferric Dithiocarbamates Exhibiting Intermediate and Low Spin Ground States.
P. Ganguli and K. M. Hasselbach 1500
- Topological Resonance Energy is Real.
C. D. Godsil and I. Gutman (N) 775
- Group Electronegativities: as Empirically Estimated from Geometrical and Vibrational Data on Sulphones.
I. Hargittai 755
- On Centrifugal Distortion and Urey-Bradley Force Field of Chlorofluoromethane.
A. I. Jaman and R. N. Nandi 954
- Symmetry Coordinates and Force Field Analysis of a Heptamolybdate, Mo_7O_{24} , Model.
L. E. Lyhamn and S. J. Cyvin 867
- Polarization, Barriers and Tunnelling Times of Some Tautomers of Adenine and Thymine.
J. Marañón and O. M. Sorarrain 315
- On the Structural Differences between Trifluoromethyl Sulphonyl Chloride ($\text{CF}_3\text{SO}_2\text{Cl}$) and Methane Sulphonyl Chloride ($\text{CH}_3\text{SO}_2\text{Cl}$).
I. Mayer and I. Hargittai (N) 911
- On the Applicability of Redington's Method of Determination of Force Field to Bent XYZ Type Systems. R. Namasivayam and S. Mayilavelan
Description of Degenerated $(\text{CH})_X^+$ -Type Carbocations by Permutations (In German).
P. J. Plath and E. C. Hass (N) 396
- Electric Dipole Moments of Some Heterocyclic Cyclobutane Derivatives in Benzene Solution.
M. Sanesi (N) 257
- On the Origin of the Rotational Barrier in Trimethylene. W. W. Schoeller 858
- "Molecular Properties" in Intense Magnetic Field.
U. Chandra Singh and V. K. Kelkar (N) 782
- Correlations between PMO Localization Energies and PO-MO Character Orders of Benzoid Part Systems of Polycyclic Aromatic Hydrocarbons (In German).
M. Zander (N) 521
- Molekülspektren, s. a. Hochfrequenzspektroskopie**
- Preparation and the Microwave and Infrared Spectra of Vinyl Ketene. E. Bjarnov 1269
- The Vibrational Spectra and Normal Coordinate Analysis of 3,3,3-Trifluoropropene and Hexafluoropropene. D. Cristen, V. Hoffmann, and P. Klacboe 1320
- Vibration Spectrum of CSFCl (In German).
R. Hamm 325
- Hyperfine Structure in the Rotational Spectrum of CuBr J. Hoeft and K. P. R. Nair 1290
- Electronic Resonance-Raman Spectrum of $((\text{C}_2\text{H}_5)_4\text{N})_2[\text{ReI}_6]$ (In German). H. Homborg (N) 778
- Infrared Spectra of Matrix Isolated Alkali Tetrafluoroaluminates, $\text{AlkAlF}_4(\text{g})$.
R. Huglen, S. J. Cyvin, and H. A. Øye 1118
- Gas Phase Two-Photon Spectroscopy of Polyazines: Pyrazine. I. Knoth, H. J. Neusser, and E. W. Schlag 979
- Resolution of K-Splitting in the Rotation-Inversion Raman Spectrum of Ammonia NH_3 .
B. Cloppenburg, K. Manczak, H. Prockl, H. W. Schrötter, and G. Strey 1160
- The Energy Gap in Polymethinestreptocyanines of Infinite Chain Lengths.
N. Tyutyulkov, J. Fabian, and O. E. Polansky (N) 1034
- The Vibronic and Infrared Spectra of Europium Dibenzoylmethane Chelate with Piperidine.
S. Zachara 748
- The UV/VIS Absorption Spectrum of 9,9'-Dianthryl-disulphide (In German).
M. Zander and R. B. Zellerhoff (N) 664
- Optik**
- On the Use of a Low Current Argon Arc with a MgF_2 -Window as a VUV-Transfer Standard of the Spectral Radiance ($125 \text{ nm} \leq \lambda \leq 335 \text{ nm}$).
D. Einfeld, K. Grützmacher, and D. Stuck 233
- On the Deconvolution of Measured Curves with Measured Apparatus Functions and the Information Content of Curves.
H. Hühnermann and N. Menzel (R) 399
- Laser Power Noise Measurements on a Cataphoretic He-Cd⁺ Laser. M. Neiger and V. Nemec (N) 260
- The Influence of the Bandwidth of the Exciting Light in Determining the Quantum Yields of Photochemical Reactions (In German).
R. Schöneich, J. Bendig, and D. Kreysig 1344
- Quanten- und Relativitätstheorie**
- Jahn-Teller $E-e$ Problem: Diagonalization by Means of a Transformed Basis.
M. Birkhold and M. Wagner 667
- On a Flexible Double Minimum Potential.
J. Bohmann and W. Witschel 1106
- Local States in One-Dimensional Symmetrical Quantum System. J. Brickmann 1452
- Measures on Operational Logics. S. Bugajski 785
- Time Periodic Perturbations of Quantum Systems.
A. Kelemen 1404
- Some Dynamical Aspects of a Test Theory of Special Relativity. R. Mansouri (N) 1355
- On the Invariance of Distribution Functions.
J. Oxenius (N) 895
- Elementary Derivation of the Dirac Equation. II (In German). H. Sallhofer (N) 772
- Elementary Derivation of the Dirac Equation. III (In German). H. Sallhofer (N) 1145
- Dirac-Like Equation for the Photon.
A. da Silveira (N) 646
- Unitarization in Nonlinear Spinor Field Quantum Theory. H. Stumpf and K. Scheerer 284
- Röntgenspektroskopie**
- Experimental Verification of $I \sim \sin^2 x/x^2$ by X-Ray Diffraction Measurements (In German).
W. Fischer and P. Wissmann (N) 1369
- X-Ray Scattering Factors of Ions in Crystals.
P. C. Schmidt and A. Weiss 1471
- Reaktionskinetik**
- The Kinetik of the Decomposition of Di-tertiary-butylperoxide up to High Pressures and Temperatures (In German). M. Buback and H. Lendle 1482

Networks Induced in Nonlinear Chemical Reaction System by Symmetries of Transformation Groups.

H. G. Busse and B. H. Havsteen 380
Information Contained in Open Systems by Example of Chemical Reaction Systems. I. Decker 915
Design of a Chemical Pulse Reactor. Steady-State and Pulsewise Operation of a Catalytic Tubular Fixed Bed Reactor with Substrate Inhibition.

B. Denzel and F. F. Seelig 1446
The Role of Dislocations in the Thermal Dehydration of Lithium Formate Monohydrate.

G. Flor, V. Berbenni, and A. Marini 1113
Kinetics of $\text{BaBr}_2 \cdot 2 \text{H}_2\text{O}$ Dehydration: Comparison between Isothermal and Non-isothermal Methods.

G. Flor, A. Marini, and V. Berbenni 437
Homogeneous Photoredox System for Hydrogen Production by Solar Energy. . . M. Gohn and N. Getoff
Energy Transfer in Competition to Charge Transfer as a Method to Determine the Rate Constant for Charge Carrier Injection in the Sandwich System: Cyanine Dye Monolayer/p-Chloranil Crystal.

H. Killesreiter 737
Kinetic Parameters from Thermogravimetric Data.

A. Marini, V. Berbenni, and G. Flor (N) 661
Solvent Dependence of the Triplet Reactivity of Pivalophenone as Evidenced by Laser Flash Photolysis.

I. Naito and W. Schnabel (N) 1251
Studies of the Chaotic Behaviour in the Peroxidase-Oxidase Reaction. J. L. F. Olsen (N) 1544

Lattice Animals as Limits of Clusters in Percolation Theory. B. Rocksloh and D. Stauffer (N) 1140

Winfree Meandering in a 2-Dimensional 2-Variable Excitable Medium. . . O. E. Rössler and C. Kahlert 565
The Nature of Chaos in a Simple Dynamical System.

A. Shibata, T. Mayuyama, M. Mizutani, and N. Saitô 1283
A CNDO/2-INDO-Study of the Mechanism of the Thermal Dimerization of Dimethylketene (In German). W. Schleker and J. Fleischhauer 488

Magnetic Field Effect on the Radical Yield of Electron Transfer Reactions between a Dye Triplet and Heavy Atom Substituted Electron Donors.

U. Steiner 1093

Thermodynamik

Solutions of Partial Differential Equations for Mean Molar Functions. F. E. Wittig 99

Equivalence to Thermodynamic Functions Induced in Nonlinear Systems by Symmetries of Transformation Groups. . . . H. G. Busse and B. Havsteen 1518

Trennverfahren

Clusius' Separation Column as a Reactor to Produce Highly Concentrated Hydrogen.

K. Hirota, K. Aizawa, and T. Nishizawa 43

Statistik von Nichtgleichgewichten

Variational Principle for Linear Relaxation Relations. S. Grossmann 1275

Variational Principle for Slow Viscous Flow of Fluids with Anisotropic and Spatially Inhomogeneous Viscosity, Upper and Lower Bounds on the Frictional Force and Torque. S. Hess 121

Boltzmann Equation Approach to Fröhlich's Vibrational Model of Bose Condensation-Like Excitations of Coherent Modes in Biological Systems.

Fr. Kaiser 134

Verbesserungen

Correction 786

Erratum 913