

Table of Contents

Preface

X-Ray Diffraction Studies of Highly-Condensed Matter

M.I. McMahon 1

Solution of Flexible Structures from Powder Diffraction Data Using a Simulated Annealing Technique

Y.G. Andreev and P.G. Bruce 14

Weighting Scheme for the Minimization Function in Rietveld Refinement and the Accuracy of Structural Parameters

H. Toraya 20

Phasing Crystal Structures from Powder Data: About the Use of the Harker Sections

M.C. Burla, B. Carrozzini, G. Polidori and R. Rizzi 26

Crystal Structure Solution from Powder Diffraction Data by the Monte Carlo Method

K.D.M. Harris, B.M. Kariuki and M. Tremayne 32

The Influence of User-Selected Models on the Results of the Rietveld Refinement of the LaOCl Structure

J. Hölsä, M. Lastusaari and J. Valkonen 38

Structure Solution from Powder Diffraction Data: Improvement of the Variances of the Extracted Integrated Intensities

J. Sañé, J. Rius and C. Miravittles 44

A New Method for High Accuracy QPA on Highly Textured Samples

D. Reefman 51

Mean-Normalised-Intensity (MNI) Method for X-Ray Powder Diffraction Phase Composition Analysis

D.Y. Li and B.H. O'Connor 57

External Standard Method in Quantitative Analysis of Bimetallic Clusters (Supported Catalysts)

J. Pielaszek 63

Avoiding Surface and Absorption Effects in XRD Quantitative Phase Analysis

G. Elvati and L. Lutterotti 69

Calculated Curves for Quantitative Powder Diffraction Analysis in Binary Mixtures, Based on Calculated Diffractograms by the Rietveld Method

V. Perdikatsis 75

Quantitative Analysis of Silicate Glass in Ceramic Materials by the Rietveld Method

L. Lutterotti, R. Ceccato, R. Dal Maschio and E. Pagani 87

The Full-Pattern Reference Intensity Ratio Method in Quantitative Phase Analysis

E. Halwax 93

On the Generalized Debye Scattering Equation

T. Wieder and H. Fuess 100

Simultaneous Analysis of the Small- and Wide-Angle Scattering from Nanometric SiC Based on the *ab initio* Pattern Simulation

S. Gierlotka, B.F. Palosz, R. Pielaszek, S. Stelmakh, S. Doyle and T. Wroblewski 106

Powder Diffraction of Small Palladium Crystallites

Z. Kaszukur 110

Profile Analysis in Asymmetric Powder Diffraction with Parallel Beam Geometry and Curved Position Sensitive Detector

O. Masson, R. Guinebrière and A. Dauter 115

Mg₃IrH₅, Another Example of Hydrogen Induced Anisotropic Line Broadening Due to Microtwinning

R. Cerný, J.-. Joubert and K. Yvon 121

Adaptation of the Rietveld Method to the Characterization of the Lamellar Microstructure of Polymers

O. Dupont, A. Jonas and R. Legras 127

Structural Studies of Bulk Pyrocarbons by Oriented Powder Methods (Experiment and Modelisation)

I. Rannou 133

XRD Profile Analysis of Clay Minerals D. Janeba, P. Čapková, Z. Weiss and H. Schenk	139
A Method to Determine the Volume Fraction of a Separate Component in a Diffracting Volume T.C. Bor, M.C. Huisman, R. Delhez and E.J. Mittemeijer	145
Strain Broadening Caused by Dislocations T. Ungár	151
Multilayer Structures: A Comparison of Results from XRD and from Structure Imaging Techniques V. Valvoda and M. Chládek	158
New Possibilities of X-Ray Diffraction Methods in Structure Investigations of Multilayer Materials J.T. Bonarski, Z. Świątek, R. Ciach, Z.T. Kuźnicki and I.M. Fodchuk	164
Use of Sliding-Window Fourier Transform in the Analysis of X-Ray Reflectivity Data R. Smigiel, A. Knoll, N. Broll and A. Cornet	170
A Computer Program for Structural Refinement from Thin Film XRD Patterns M. Leoni and P. Scardi	177
Texture Models in Powder Diffraction Analysis M. Järvinen	184
Implications of Texture on Powder Diffraction - Three-Dimensional Powder Diffraction - H.J. Bunge	200
Mapping in Real and Reciprocal Space T. Wroblewski, D. Breuer, H.A. Crostack, F. Fandrich, M. Gross and P. Klimanek	216
A New Approach for Getting Refined X-Ray Diffraction Patterns by Using X-Ray Diffractometers with Energy Resolving Detectors D.C. Meyer, P. Gawlitza, A. Seidel, K. Richter and P. Paufler	221
X-Ray Optics for Materials Research V.A. Kogan and J. Bethke	227
Multifiber Polycapillary Collimator for X-Ray Powder Diffraction Q.F. Xiao, R.J. Kennedy, T.W. Ryan and B.R. York	236
Measurements in Parallel-Beam Geometry Achieved by a Göbel Mirror at a Laboratory Source M. Gross, S. Haaga, H. Heitzek, M. Herrmann and W. Engel	242
High Temperature X-Ray Diffraction: Uncertainties in Temperature Measurement and Intensity Limitations W. Pitschke and A. Teresiak	248
Temperature Distribution at the Sample Surface in High-Temperature XRD Using Infrared Thermography W. Fischer and P. Lersch	254
A New High-Temperature Furnace Chamber E.B. Fantner, B. Koppelhuber-Bitschnau, F.A. Mautner, P. Doppler and J. Gautsch	260
<i>In Situ</i> Heat Treatment Structural Studies with Curved Detector F. Muller and I. Rannou	264
<i>In Situ</i> X-Ray Diffraction Analyses of Catalytic Reactions and Moderate-Pressure Geological Processes T.B. Žunić, G. Steffensen and J. Villadsen	270
Standard Reference Materials for the Measurement of Instrument Resolution Functions: Effect of Transparency J.I. Langford, M. Leoni and P. Scardi	278
Toward EXPO: From the Powder Pattern to the Crystal Structure A. Altomare, M.C. Burla, M. Camalli, B. Carrozzini, G. Cascarano, C. Giacovazzo, A. Guagliardi, A.G.G. Moliterni, G. Polidori and R. Rizzi	284
Solving Crystal Structures from Powder Data: The Use of a Molecular Fragment A. Altomare, C. Giacovazzo, A. Guagliardi and A.G.G. Moliterni	289
Crystal Structure Determination from Powder Diffraction Data by the Application of a Genetic Algorithm R. Csoka, W.I.F. David and K. Shankland	294
Rietveld Analysis of Disordered Layer Silicates J. Bergmann and R. Kleeberg	300

ZONE - A Program for Analysis of Brillouin Zone Configuration O. Degtyareva and B.Z. Narymbetov	306
The Use of Brilliance in Powder Diffraction: Towards High Resolution Kinetic Studies R.J. Cernik and R. Lewis	312
Development of Curved Image-Plate Techniques for Studies of Powder Diffraction, Liquids and Amorphous Materials M.A. Roberts, J.L. Finney and G. Bushnell-Wye	318
High Resolution Synchrotron Strain Scanning at BM16 at the ESRF P.J. Webster, G.B.M. Vaughan, G. Mills and W.P. Kang	323
Analysis of Plastic Deformation with Energy-Dispersive X-Ray Diffraction: Application to Deformation with a Diamond Anvil Cell J.W. Otto and J.K. Vassiliou	329
<i>In situ</i> X-Ray Diffraction Method to Study Natural Gas Hydrates C.C. Tang, M.C. Miller, R.J. Cernik, S.M. Clark, C.A. Koh, R.E. Motie, R.I. Nooney, R. Westacott, R. Wisbey and J.L. Savidge	335
Recent Developments in Powder Diffraction Using Pulsed Neutrons S. Hull	342
The Application of Dynamic Characterization to the Melt Texturing of $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$ B.J. Chen and R.L. Snyder	354
The Use of <i>in-situ</i> Powder Diffraction in the Study of Intercalation and Hydrothermal Reaction Kinetics D. O'Hare, J.S.O. Evans, R. Francis, S. Price and S. O'Brien	367
Kinetic Study of Conventional Solid-State Synthesis of BaTiO_3 by <i>in situ</i> HT-XRD F. Bondioli, A. Bonamartini Corradi, A.M. Ferrari, T. Manfredini and G.C. Pellacani	379
Thermal Expansion of C_3S and Mg-Doped Alite A. Viani, G. Artioli and M. Bellotto	384
Thermal Expansion of Chromites and Zinc Spinel D. Lévy and G. Artioli	390
Phase Transition of Iron Oxide at High Temperature L. Petrás, A. Preisinger and K. Mereiter	396
Time-and Temperature Resolved X-Ray Diffraction: The Nitridation of a Mixture $\text{Nb}_2\text{O}_5/\text{Fe}_2\text{O}_3$ with Ammonia U. Reusch and E. Schweda	402
An <i>in situ</i> Diffraction Study of a Solid Oxide Fuel Cell System L. Sörby, F.W. Poulsen, H.F. Poulsen, S. Garbe and J.O. Thomas	408
Hydrothermal Transformation of Microporous Lithium Zinc Phosphates: A Kinetic Study Using <i>in situ</i> Synchrotron Radiation Powder Diffraction T.R. Jensen, P. Norby and J.C. Hanson	414
Kinetics of Hydrothermal Synthesis of Li-A(BW) from Metakaolinite by Time Resolved Synchrotron Diffraction A.F. Gualtieri and P. Norby	418
Dehydroxylation Kinetics of Muscovite-2M_1 E. Mazzucato, G. Artioli and A.F. Gualtieri	424
Time and Temperature Resolved Studies of Crystallisation of Polymers with Rapid X-Ray Diffraction S. Haaga, M. Gross, M. Herrmann and W. Engel	430
Crystalline and Amorphous States in Alloys Zn-Sb and Cd-Sb under High Pressure V.F. Degtyareva, I.K. Bdikin and S. Khasanov	434
High Temperature Grazing Incidence Studies on Aluminium Films J. Klimke, L. Fischer and H. Wulff	442
High Temperature X-Ray Diffraction Studies of the Phase Formation Process of Iridium Silicide Thin Films R. Kurt, W. Pitschke, A. Heinrich and K. Wetzig	448
Application of the Distorted-Wave Born Approximation to Interface Characterization in W/Si Multilayer Thin Films M. Jergel, V. Holý, R. Senderák, E. Majková and S. Luby	454
Microstructural Characterization of Nanocrystalline Thin Films by Grazing Incidence Diffraction: Au and $\text{Tb}_{0.3}\text{Dy}_{0.7}\text{Fe}_2$ (Terfenol-D) A. Skokan, P. von Blanckenhagen, E. Quandt and M. Walter	460

Structure of Reactively Sputtered Ta-N-O Films N. Mattern, M. Stavrev and D. Fischer	466
Effects of Oxygen Stoichiometry on the Structural Properties of W-Ti-O Thin Films L. Sangaletti, L.E. Depero, B. Allieri, S. Groppelli and G. Sberveglieri	472
X-Ray Diffraction Measurements on c-Axis Oriented YBaCuO Thin Films Deposited by Metalorganic Vapour Deposition J. Bassas, X. Alcobé, M. Doudkowsky, J. Santiso, S. Berton and A. Figueras	478
Modification of Crystallinity in Poly (Vinylalcohol) Derivatives A. Duta, A. Duta, D. Perniu and B. Cismas	486
The Crystallinity of the Copolymers Based on Acrylic Monomers and Lignosulphonates L. Dumitrescu, A. Duta and R. Tica	490
Structural Studies of Submicron Grained Copper, Germanium and Silicon R. Kužel, R.K. Islamgaliev and F. Chmelík	496
On the Longtime Stability of a Copper Rolling Texture Analysed by Neutron Diffraction Pole Figures E. Jansen, W. Schäfer, A. Kirfel and J. Palacios	502
Neutron and X-Ray Diffraction Measurements of Residual Stresses in a Shape Welded Steel Tube Y.V. Taran and J. Schreiber	508
Neutron Diffraction Applied to the Study of Microstructure and Texture of Industrial Magnetic Alnico Material A. Alker, E. Jansen, W. Schäfer, A. Kirfel, D. Seitz and M. Grönefeld	514
Structural Changes in High Velocity Oxy-Fuel Sprayed Cr₃C₂/NiCr 75/25 Coatings after Annealing Treatments I. Natali-Sora, F. Mor, G.M. La Vecchia and M. Zocchi	520
A Systematic Structural Study, Interpretation and Prediction of Physical Properties for the Hard Magnetic Intermetallic Compound RE₃T₂₉, Based on Structure-Superstructure Relations ... V. Psycharis, O. Kalogirou, D. Niarchos and M. Gjoka	526
Site Exchange in Hexagonal Ce(Ni,Cu)₆ Intermetallics O. Moze, W.A. Kockelmann, E. Brück and K.H.J. Buschow	532
Time-of-Flight Neutron Powder Diffraction Investigation of Tb₂Co_{17-x}Ga_x Permanent Magnet Materials L. Giovanelli, O. Moze, W.A. Kockelmann, C.H. de Groot, F.R. de Boer and K.H.J. Buschow	537
Structural Characteristics of Rare Earth (R = Tb, Ho, Er) Ternary Magnetic Intermetallics RFe_xAl_{12-x} with Iron Concentrations x = 6 W. Schäfer, W.A. Kockelmann, E. Jansen, S. Fredo and J. Gal	542
Magnetic Structure of Tb Substituted LaMn₂Si₂ Intermetallics M. Lazzarini, O. Moze, R. Sonntag, M. Hofmann, Y. Nakayama, J.M. Cadogan and D. Courtois	548
Competing Magnetic Interactions in La_{0.8}Y_{0.2}Mn₂Si₂ M. Hofmann, S.J. Campbell, R.I. Smith, S.J. Kennedy, X.L. Zhao and A.V.J. Edge	553
X-Ray Diffraction Study of Nanocrystalline Phases Formation in Metallic Systems M. Baricco, P. Rizzi and S. Enzo	559
Mössbauer Study of Fe-Powder Mechanically Alloyed by N and C V.M. Nadutov and J. Rawers	565
Mechanism of Pseudo-Boehmite Dehydration: Influence of Reagent Structure and Reaction Kinetics on the Transformation Sequence M. Bellotto, B. Rebours and P. Euzen	572
Phase Selective Chemical Analysis of Multi-Component Solids by X-Ray Powder Diffraction: On the Composition of α-Cordierit-Like Solid Solutions Crystallizing from Non-Stoichiometric Glasses B. Peplinski, W.A. Schiller, J. Wenzel, D. Schultze and I. Schiemann	578
X-Ray Powder Diffraction Study on the Solubility Limits in the Goethite-Diaspore Solid Solutions P. Piszora and E. Wolska	584
X-Ray Powder Diffraction Study of Solids in the CaO-Al₂O₃-B₂O₃ System N.I. Leonyuk and E.P. Shvanskiy	589

Cation Distribution in Ferrites with Spinel Structure Measured by Anomalous Powder Diffraction	
F. Bernard, J. Lorimier, V. Nivoix, N. Millot, P. Perriat, J.C. Niepce, B. Gillot, M. Ferlet and J.F. Berar	594
Temperature Dependence of the Alpha-Galliumphosphate Structure	
P. Worsch, B. Koppelhuber-Bitschnau, F.A. Mautner, P.W. Krempel and W. Wallnöfer	600
Characterization of Sol-Gel Nanoparticles of Magnetoresistive $\text{La}_{0.67}\text{Ca}_{0.33}\text{MnO}_{3+\delta}$	
C. Vázquez-Vázquez, M.A. López-Quintela, R.D. Sánchez, D. Caeiro, J. Rivas and S.B. Oseroff	606
Evolution of Disorder in SiC under High Pressure High Temperature Conditions: <i>In-situ</i> Powder Diffraction Study	
B.F. Palosz, S. Stelmakh, S. Gierlotka, M. Aloszyna, R. Pielaszek, P. Zinn, T. Peun, U. Bismayer and D.G. Keil	612
Order-Disorder Structure Formation and Distribution of Lithium Ions in the $\text{LiMn}_2\text{O}_4/\text{LiFe}_5\text{O}_8$ Spinel Solid Solutions	
E. Wolska and K. Stempin	618
XRPD Analysis of Stable and Metastable Magnesium Titanate Phases	
G. Kimmel and J. Zabicky	624
XRPD Characterization of Manganese Dioxide for Electrochemical Applications	
D. Mazza, S. Ronchetti, S. Bodoardo and M. Lucco-Borlera	630
X-Ray Diffraction Investigation on MoS_2 Nanoparticles Produced by CO_2 Laser Assisted Synthesis	
E. Borsella, S. Botti, M.C. Cesile, S. Martelli and A. Nesterenko	636
Crystal Structures and <i>cis</i>→<i>trans</i> Transformation in $[\text{Pd}(\text{NH}_3)_2\text{Hal}_2]$	
S.D. Kirik, L.A. Solovyov, A.I. Blokhin and I.S. Yakimov	642
X-Ray Powder Diffraction of the Strontium Nitroprusside Tetrahydrate at Different Temperatures under 300K: Sample Evolution to a Mixed (Tetra, Di, Mono)-Hydrate Phase	
G. Chevrier, A. Navaza and J.M. Kiat	648
Microstructural Properties of Ta-Doped TiO_2 Powders Obtained by Laser Pyrolysis	
L.E. Depero, L. Sangaletti, B. Allieri, F. Pioselli, C. Casale and M. Notaro	654
Structural Characterization of Vanadiumphosphate Catalysts Generated under Ammoxidation Conditions	
U. Steinike, F. Krumeich, L. Wilde, A. Martin and G.-. Wolf	660
<i>In situ</i> Studies of the Dehydration of Edingtonite and Brewsterite	
K. Ståhl	666
X-Ray Powder Diffraction Study on the Hydrothermally Obtained Zinc-Manganese Ferrites	
E. Wolska, W. Wolski and J. Kaczmarek	672
Rietveld Refinement of Two-Phase Zr-Doped Y_2O_3	
G. Baldinozzi, J.F. Béar and G. Calvarin-Amiri	680
Cation Deficiency in Ordered-Vacancy Ternary Sulfides	
D.C. Colgan and A.V. Powell	686
Cation Partitioning in $\text{Mg}_{0.70}\text{Fe}_{0.23}\text{Al}_{1.97}\text{O}_4$ Synthetic Spinel by <i>in situ</i> Neutron Powder Diffraction	
G. Artioli, A. Pavese, D. Lévy, U. Russo and A. Hoser	692
Structure Determination of $\text{Al}_{0.67}\text{Fe}_{0.33}\text{PO}_4$: An Example of Convergence of X-Ray Diffraction and Mössbauer Spectroscopy Results	
S. Ronchetti, D. Mazza, M. Lucco-Borlera and M. Salis	698
<i>Ab initio</i> Structure Analysis of $\text{VO}(\text{HPO}_4)$	
L. Wilde, J. Trommer, U. Steinike, H. Worzala and G.-. Wolf	704
Crystal Structure and Magnetic Properties of Fe_2OBO_3	
A.M.T. Bell, L.M. Rodríguez-Martínez, J.P. Attfield, R.J. Cernik, J.F. Clarke and D.A. Perkins	708
The Structure of RhMO_4, M = Nb, Ta, and Sb	
Ismunandar, B.J. Kennedy and B.A. Hunter	714
The Structure of Orthorhombic Hafnates by Neutron Powder Diffraction and Perturbed-Angular-Correlation Spectroscopy (PAC)	
J.A. Guevara, S.L. Cuffini, Y.P. Mascarenhas, R.E. Carbonio, J.A. Alonso, M.T. Fernandez, P. de la Presa, A. Ayala-Morales and A. López García	720

Structural Study of the Proton Conductor Cs₃H(SeO₄)₂ by High Resolution Neutron Powder Diffraction	
R. Sonntag, R. Melzer, K.S. Knight and P.G. Radaelli	726
Neutron Diffraction Study of Frozen Fe(ClO₄)₂ Solutions	
G. Mészáros, L. Almásy, E. Sváb, L. Cser and I. Dézsi	732
Neutron Diffraction Studies of AMnO₃ Perovskites	
L.M. Rodríguez-Martínez and J.P. Attfield	738
Powder Neutron Diffraction Studies of a New Ferrimagnetic Manganese Oxide with a Layered Perovskite Structure: YBaMn₂O₅	
J.A. McAllister and J.P. Attfield	744
The Cu(II)O₄ Tetrahedron in the Åkermanite Structure	
M. Tovar, R.E. Dinnebier and W. Eysel	750
Crystal Structure of Nd₄Cu₂O₇	
D.R. Pederzoli and J.P. Attfield	756
Structure and Bonding in Bi₂Sn₂O₇	
B.J. Kennedy, Ismunandar and M. Elcombe	762
Structural Aspects of Ferroelectric Phase Transitions in the Complex Metal Oxides A₂Sb₂O₇ (A = Pb, Sr, Ca) with Weberite Structure	
S. Ivanov, R. Tellgren and H. Rundlöf	768
Structure Determination and Rietveld Refinement of La(Mg_{0.5}Ti_{0.5})O₃	
A. Meden and M. Čeh	773
Synchrotron and Conventional X-Ray Rietveld Study of Clouded Plagioclase from Southern Sweden	
B. Estifanos and K. Ståhl	779
Discovery of New Minerals Zlatogorite, Turkestanite and Belovite-(La) by Rietveld Refinement from X-Ray Powder Diffraction Data	
Y. Kabalov and E. Sokolova	785
Structure Analysis of Intercalated Clays Using Combination of Molecular Simulations, Powder Diffraction and IR Spectroscopy	
P. Čapková, D. Janeba, M. Trchová, R.A.J. Driessen, H. Schenk, Z. Weiss and Z. Klika	791
XRPD Study on Cation Location in Na-Rb-Y Zeolite at the ESRF under Carefully Controlled Atmospheres: Vacuum, H₂O, NH₃	
A. Fitch, G.L. Marra, A. Zecchina, G. Ricchiardi, M. Salvalaggio, S. Bordiga and C. Lamberti	797
Structure Determination by Neutron Diffraction on Dehydrated Li-SX Zeolite: Evidence for a Low-Temperature Orthorhombic Faujasite	
J. Plévert, F. Di Renzo, F. Fajula and G. Chiari	803
XRD Study of the Stacking Mode in Natural and Hydrated Nacrite	
A. Ben Haj Amara, A. Plançon, J. Ben Brahim and H. Ben Rhaïem	809
Structural Refinements of Strontium Substituted Hydroxylapatites	
A. Bigi, G. Falini, M. Gazzano, N. Roveri and E. Tedesco	814
Structure-Microstructure Relationships in LiMn₂O₄ Spinel Phase	
V. Massarotti, M. Bini, D. Capsoni, P. Scardi and M. Leoni	820
X-Ray Diffraction Study of Amorphous Zr-Fe-O System	
D.A. Ziouzin, E.M. Moroz and A.S. Ivanova	826
Quantitative Determination of Crystalline and Amorphous Phase in Traditional Ceramics by Combined Rietveld-RIR Method	
A.F. Gualtieri and M. Zanni	834
Quantitative Phase Analysis of Kaolinite / Quartz Mixtures - Statistical Evaluation of Different Sample Preparation Techniques -	
J. Göske, W.K. Schuckmann, L.M. Costa and H. Pöllmann	840
The Role of Powder X-Ray Diffraction in the Cement Industry: Recent Advances and Future Developments	
M. Bellotto and M. Signes-Frehel	846
Chemical Analysis via Non Destructive XRPD on "Green Stone" Artifacts	
G. Chiari, R. Compagnoni and R. Giustetto	852
Neutron Diffraction Investigation of Effects Induced in Materials by High-Current Pulsed Electron Beam Irradiation	
V.V. Sikolenko, S.A. Korenev and G.D. Bokuchava	858

Nanocrystalline Structure of the Metastable Ball-Milled Inverse Spinel-Ferrites V. Šepelák, A. Buchal, K. Tkáčová and K.D. Becker	862
Quantitative Analysis of XRD and SAXS Patterns: Determination of the Mineralogy and Microstructure of Ca-Interstratified Clays H. Ben Rhaïem, A. Ben Haj Amara, J. Ben Brahim and C.H. Pons	868
X-Ray Powder Structural and Microstructural Study of Nanocrystalline Copper Oxide V. Massarotti, D. Capsoni, M. Bini, A. Altomare and A.G.G. Moliterni	873
Microstructural Study of Nanocrystalline CeO₂ by X-Ray Powder Diffraction and High Resolution Transmission Electron Microscopy N. Guillou, L. Nistor, H. Fuess and H. Hahn	879
Allowance for Anisotropic Line Broadening in the Crystal Structure Solution of [Pd(NH₃)₄][Pd(C₂O₄)₂] L.A. Solovyov	885
Structural Characterization of Cu Metallic Clusters in Amorphous SiO₂ by Synchrotron Radiation Grazing Incidence X-Ray Scattering and Diffraction F. D'Acapito, D. Thiaudière, F. Zontone and J.R. Regnard	891
The Molecular Goldsmith: From Silver Threads to Silver Rings N. Masciocchi, E. Corradi, M. Moret, G.A. Ardizzioia, G. La Monica, A. Maspero and A. Sironi	898
Crystalchemistry of Organic Sulfonates Used as Cement Additives S. Št. Stöber and H. Pöllmann	904
Powder Diffraction Data for Some Salts of Aconitic Acid J.N. Dunlevey and G. Dawson	909
Studies of the Crystalline Forms of Bis(Glycinato)Copper(II) S.M. Moussa, R.R. Fenton and B.J. Kennedy	912
Anisotropy of the Intermolecular Interactions from the Study of the Thermal-Expansion Tensor J. Salud, M. Barrio, D.O. López, J.L. Tamarit, X. Alcobé and J. Bassas	918
Lamellar Disorder in <i>n</i>-Alkanes and Their Binary Mixtures Studied by X-Ray Powder Diffraction J. Fenrych and E.C. Reynhardt	924