

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. Pielaśzek 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. Pielaśzek, S. Stelmakh, S. Doyle and T. Wroblewski 106

Powder Diffraction of Small Palladium Crystallites

Z. Kaszkur 110

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

O. Masson, R. Guinebretière and A. Dauger 115

Mg₃IrH_{~5}, 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	139
D. Janeba, P. Čapková, Z. Weiss and H. Schenk	
A Method to Determine the Volume Fraction of a Separate Component in a Diffracting Volume	145
T.C. Bor, M.C. Huisman, R. Delhez and E.J. Mittemeijer	
Strain Broadening Caused by Dislocations	151
T. Ungár	
Multilayer Structures: A Comparison of Results from XRD and from Structure Imaging Techniques	158
V. Valvoda and M. Chládek	
New Possibilities of X-Ray Diffraction Methods in Structure Investigations of Multilayer Materials	164
J.T. Bonarski, Z. Świątek, R. Ciach, Z.T. Kuźnicki and I.M. Fodchuk	
Use of Sliding-Window Fourier Transform in the Analysis of X-Ray Reflectivity Data	170
R. Smigiel, A. Knoll, N. Broll and A. Cornet	
A Computer Program for Structural Refinement from Thin Film XRD Patterns	177
M. Leoni and P. Scardi	
Texture Models in Powder Diffraction Analysis	184
M. Järvinen	
Implications of Texture on Powder Diffraction - Three-Dimensional Powder Diffraction -	200
H.J. Bunge	
Mapping in Real and Reciprocal Space	216
T. Wroblewski, D. Breuer, H.A. Crostack, F. Fandrich, M. Gross and P. Klimanek	
A New Approach for Getting Refined X-Ray Diffraction Patterns by Using X-Ray Diffractometers with Energy Resolving Detectors	221
D.C. Meyer, P. Gawlitza, A. Seidel, K. Richter and P. Paufler	
X-Ray Optics for Materials Research	227
V.A. Kogan and J. Bethke	
Multifiber Polycapillary Collimator for X-Ray Powder Diffraction	236
Q.F. Xiao, R.J. Kennedy, T.W. Ryan and B.R. York	
Measurements in Parallel-Beam Geometry Achieved by a Göbel Mirror at a Laboratory Source	242
M. Gross, S. Haaga, H. Heitzek, M. Herrmann and W. Engel	
High Temperature X-Ray Diffraction: Uncertainties in Temperature Measurement and Intensity Limitations	248
W. Pitschke and A. Teresiak	
Temperature Distribution at the Sample Surface in High-Temperature XRD Using Infrared Thermography	254
W. Fischer and P. Lersch	
A New High-Temperature Furnace Chamber	260
E.B. Fantner, B. Koppelhuber-Bitschnau, F.A. Mautner, P. Doppler and J. Gautsch	
In Situ Heat Treatment Structural Studies with Curved Detector	264
F. Muller and I. Rannou	
In Situ X-Ray Diffraction Analyses of Catalytic Reactions and Moderate-Pressure Geological Processes	270
T.B. Žunić, G. Steffensen and J. Villadsen	
Standard Reference Materials for the Measurement of Instrument Resolution Functions: Effect of Transparency	278
J.I. Langford, M. Leoni and P. Scardi	
Toward EXPO: From the Powder Pattern to the Crystal Structure	284
A. Altomare, M.C. Burla, M. Camalli, B. Carrozzini, G. Cascarano, C. Giacovazzo, A. Guagliardi, A.G.G. Moliterni, G. Polidori and R. Rizzi	
Solving Crystal Structures from Powder Data: The Use of a Molecular Fragment	289
A. Altomare, C. Giacovazzo, A. Guagliardi and A.G.G. Moliterni	
Crystal Structure Determination from Powder Diffraction Data by the Application of a Genetic Algorithm	294
R. Csoka, W.I.F. David and K. Shankland	
Rietveld Analysis of Disordered Layer Silicates	300
J. Bergmann and R. Kleeberg	

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

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

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 Disordering 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 cis→trans Transformation in $[\text{Pd}(\text{NH}_3)_2\text{Hai}_2]$	
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 Ammonoxidation 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. Bérar 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 Spinels 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 Hafniates 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 Garcia	720

Structural Study of the Proton Conductor $\text{Cs}_3\text{H}(\text{SeO}_4)_2$ by High Resolution Neutron Powder Diffraction	726
R. Sonntag, R. Melzer, K.S. Knight and P.G. Radaelli	
Neutron Diffraction Study of Frozen $\text{Fe}(\text{ClO}_4)_2$ Solutions	732
G. Mészáros, L. Almásy, E. Sváb, L. Cser and I. Dézsi	
Neutron Diffraction Studies of AMnO_3 Perovskites	738
L.M. Rodríguez-Martínez and J.P. Attfield	
Powder Neutron Diffraction Studies of a New Ferrimagnetic Manganese Oxide with a Layered Perovskite Structure: YBaMn_2O_5	744
J.A. McAllister and J.P. Attfield	
The Cu(II)O_4 Tetrahedron in the Åkermanite Structure	750
M. Tovar, R.E. Dinnebier and W. Eysel	
Crystal Structure of $\text{Nd}_4\text{Cu}_2\text{O}_7$	756
D.R. Pederzolli and J.P. Attfield	
Structure and Bonding in $\text{Bi}_2\text{Sn}_2\text{O}_7$	762
B.J. Kennedy, Ismunandar and M. Elcombe	
Structural Aspects of Ferroelectric Phase Transitions in the Complex Metal Oxides $\text{A}_2\text{Sb}_2\text{O}_7$ ($\text{A} = \text{Pb, Sr, Ca}$) with Weberite Structure	768
S. Ivanov, R. Tellgren and H. Rundlöf	
Structure Determination and Rietveld Refinement of $\text{La}(\text{Mg}_{0.5}\text{Ti}_{0.5})\text{O}_3$	773
A. Meden and M. Čeh	
Synchrotron and Conventional X-Ray Rietveld Study of Clouded Plagioclase from Southern Sweden	779
B. Estifanos and K. Ståhl	
Discovery of New Minerals Zlatogorite, Turkestanite and Belovite-(La) by Rietveld Refinement from X-Ray Powder Diffraction Data	785
Y. Kabalov and E. Sokolova	
Structure Analysis of Intercalated Clays Using Combination of Molecular Simulations, Powder Diffraction and IR Spectroscopy	791
P. Čapková, D. Janeba, M. Trchová, R.A.J. Driessen, H. Schenk, Z. Weiss and Z. Klika	
XRPD Study on Cation Location in Na-Rb-Y Zeolite at the ESRF under Carefully Controlled Atmospheres: Vacuum, H_2O, NH_3	797
A. Fitch, G.L. Marra, A. Zecchina, G. Ricchiardi, M. Salvalaggio, S. Bordiga and C. Lamberti	
Structure Determination by Neutron Diffraction on Dehydrated Li-SX Zeolite: Evidence for a Low-Temperature Orthorhombic Faujasite	803
J. Plévert, F. Di Renzo, F. Fajula and G. Chiari	
XRD Study of the Stacking Mode in Natural and Hydrated Nacrite	809
A. Ben Haj Amara, A. Plançon, J. Ben Brahim and H. Ben Rhaiem	
Structural Refinements of Strontium Substituted Hydroxylapatites	814
A. Bigi, G. Falini, M. Gazzano, N. Roveri and E. Tedesco	
Structure-Microstructure Relationships in LiMn_2O_4 Spinel Phase	820
V. Massarotti, M. Bini, D. Capsoni, P. Scardi and M. Leoni	
X-Ray Diffraction Study of Amorphous Zr-Fe-O System	826
D.A. Ziouzin, E.M. Moroz and A.S. Ivanova	
Quantitative Determination of Crystalline and Amorphous Phase in Traditional Ceramics by Combined Rietveld-RIR Method	834
A.F. Gualtieri and M. Zanni	
Quantitative Phase Analysis of Kaolinite / Quartz Mixtures - Statistical Evaluation of Different Sample Preparation Techniques -	840
J. Göske, W.K. Schuckmann, L.M. Costa and H. Pöllmann	
The Role of Powder X-Ray Diffraction in the Cement Industry: Recent Advances and Future Developments	846
M. Bellotto and M. Signes-Frehel	
Chemical Analysis via Non Destructive XRPD on "Green Stone" Artifacts	852
G. Chiari, R. Compagnoni and R. Giustetto	
Neutron Diffraction Investigation of Effects Induced in Materials by High-Current Pulsed Electron Beam Irradiation	858
V.V. Sikolenko, S.A. Korenev and G.D. Bokuchava	

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