

Review Articles Through the Years

Title	Authors	Page
2002		
Chiral Polyolefins	T. E. Hopkins, K. B. Wagener	
Perspectives of Thin Molecular Organic Films	J. Fraxedas	
Charge-Transporting Molecular Glasses	P. Strohriegl, J. Grazulevicius	1435
Polymer-Based Optical Waveguides: Materials, Processing, and Devices	H. Ma, A. K.-Y. Jen, L. R. Dalton	1339
Manipulation and Monitoring Biomolecular Interactions with Conducting Electroactive Polymers	G. G. Wallace, L. A. P. Kane-Maguire	953
Calcium Carbonate–Organic Hybrid Materials	T. Kato, A. Sugawara, N. Hosoda	869
Encapsulated Conducting Polymers	D. Cardin	553
Semiconducting Polyfluorenes—Towards Reliable Structure–Property Relations	U. Scherf, E. J. W. List	477
Digital Processing and Communication with Molecular Switches	F. M. Raymo	401
Organic Thin Film Transistors for Large Area Electronics <i>and the following Progress Reports:</i>	C. D. Dimitrakopoulos, P. R. L. Malenfant	99
Molecules and Electronic Materials	D. Cahen, G. Hodes	789
Bio-inspired Materials Chemistry	E. Dujardin, S. Mann	775
Advanced Engineering Ceramics	P. Greil	709
Fluorescence and Phosphorescence in Organic Materials	A. Köhler, J. S. Wilson, R. H. Friend	701
Challenges in Computational Materials Science	D. Raabe	639
Microporous and Mesoporous Materials	F. Schüth, W. Schmidt	629
2001		
Electrorheological Fluids	T. Hao	1847
Patterning π -Conjugated Polymers	S. Holdcroft	1753
Siloxane and Carbosiloxane Based Dendrimers: Synthesis, Reaction Chemistry, and Potential Applications	H. Lang, B. Lühmann	1523
Nanocomposite Materials Formed by Ion Implantation	A. Meldrum, R. F. Haglund, Jr., L. A. Boatner, C. W. White	1431
Controlling Ion-Transport Selectivity in Gold Nanotubule Membranes	C. R. Martin, M. Nishizawa, K. Jirage, M. Kang, S. B. Lee	1351
Supramolecular Materials via Block Copolymer Self-Assembly	H.-A. Klok, S. Lecommandoux	1217
Cholesteric Liquid Crystals for Color Information Technology	N. Tamaoki	1135
Interchain Interactions in Organic π -Conjugated Materials: Impact on Electronic Structure, Optical Response, and Charge Transport	J. Cornil, D. Beljonne, J.-P. Calbert, J.-L. Brédas	1053
Plastic Crystal Electrolyte Materials: New Perspectives on Solid State Ionics	D. R. MacFarlane, M. Forsyth	957
Novel Lithium-Ion Cathode Materials Based on Layered Manganese Oxides	B. Ammundsen, J. Paulsen	943
Systematic Conductivity Behavior in Conducting Polymers: Effects of Heterogeneous Disorder	A. B. Kaiser	927
Conjugated Polymers for Light-Emitting Applications	L. Dai, B. Winkler, L. Dong, L. Tong, A. W. H. Mau	915
Controlled Synthesis and Modification of Carbon Nanotubes and C_{60} : Carbon Nanostructures for Advanced Materials	L. Dai, A. W. H. Mau	899
Inorganic Chiral Optical Materials	I. Hodkinson, Q. h. Wu	889
Nanolithography in the Evanescent Near Field	M. M. Alkaisi, R. J. Blaikie, S. J. McNab	877
Electrochromic Systems and the Prospects for Devices	D. R. Rosseinsky, R. J. Mortimer	783
Organic–Inorganic Nanocomposites: Unique Resists for Nanolithography	K. E. Gonsalves, L. Merhari, H. Wu, Y. Hu	703
Transition-Metal-Polythiophene Hybrid Materials	M. O. Wolf	545
Imprinted Polymers	M. J. Whitcombe, E. N. Vulfson	467
Silicon-Based Photonic Crystals	A. Birner, R. B. Wehrspohn, U. M. Gösele, K. Busch	377
Chemical Approaches to Three-Dimensional Semiconductor Photonic Crystals	D. J. Norris, Y. A. Vlasov	371
Epitaxy and Molecular Organization on Solid Substrates	D. E. Hooks, T. Fritz, M. D. Ward	227
Hybrid Organic–Inorganic Materials—In Search of Synergic Activity	P. Gomez-Romero	163
Molecular Lubricants and Glues for Micro- and Nanodevices	V. V. Tsukruk	95
Nanoengineering of Particle Surfaces	F. Caruso	11
2000		
Crosslinked Spherical Nanoparticles with Core–Shell Topology	W. Schärtl	1899
Poly(hydroxyaminoethers): A New Family of Epoxy-Based Thermoplastics	J. E. White, H. C. Silvis, M. S. Winkler, T. W. Glass, D. E. Kirkpatrick	1791
Lightweight Cellular Plastics	K. W. Suh, C. P. Park, M. J. Maurer, M. H. Tusim, R. De Genova, R. Broos, D. P. Sophiae	1779
Development of a Low-Dielectric-Constant Polymer for the Fabrication of Integrated Circuit Interconnect	S. J. Martin, J. P. Godschalk, M. E. Mills, E. O. Shaffer II, P. H. Townsend	1769

Title	Authors	Page
Materials Properties Derived from INSITE Metallocene Catalysts	P. S. Chum, W. J. Kruper, M. J. Guest	1759
Properties and Applications of Microemulsions	J. Klier, C. J. Tucker, T. H. Kalantar, D. P. Green	1751
Progress with Light-Emitting Polymers	M. T. Bernius, M. Inbasekaran, J. O'Brian, W. Wu	1737
Synthetic Inorganic Materials	J. M. Garcés, A. Kuperman, D. M. Millar, M. M. Olken, A. J. Pyzik, W. Rafaniello	1725
Semiconducting (Conjugated) Polymers as Materials for Solid-State Lasers	M. D. McGehee, A. J. Heeger	1655
GaN Electronics	S. J. Pearton, F. Ren	1571
Surface Modification of Fluoropolymers via Molecular Design	E. T. Kang, Y. Zhang	1481
Hybrid Inorganic–Organic Mesoporous Silicates—Nanoscopic Reactors Coming of Age	A. Stein, B. J. Melde, R. C. Schrodens	1403
Sensor Functionalities in Self-Assembled Monolayers	S. Flink, F. C. J. M. van Veggel, D. N. Reinhoudt	1315
Organogels and Low Molecular Mass Organic Gelators	D. J. Abdallah, R. G. Weiss	1237
Reactions and Reactivity in Self-Assembled Monolayers	V. Chechik, R. M. Crooks, C. J. M. Stirling	1161
Tailor-Made Receptors by Molecular Imprinting	H. Asanuma, T. Hishiya, M. Komiyama	1019
True Blue Inorganic Optoelectronic Devices	D. A. Gaul, W. S. Rees, Jr.	935
Chemical and Biological Applications of Porous Silicon Technology	M. P. Stewart, J. M. Buriak	859
Monodispersed Colloidal Spheres: Old Materials with New Applications	Y. Xia, B. Gates, Y. Yin, Y. Li	693
Auxetic Materials: Functional Materials and Structures from Lateral Thinking!	K. E. Evans, A. Alderson	617
Assembled Materials: Polyelectrolyte–Surfactant Complexes	S. Zhou, B. Chu	545
Poly(3,4-ethylenedioxythiophene) and Its Derivatives: Past, Present, and Future	B. L. Groenendaal, F. Jonas, D. Freitag, H. Pielartzik, J. R. Reynolds	481
Probing the Mesoscopic Chemical and Physical Properties of Polymer-Dispersed Liquid Crystals	D. A. Higgins	251
Polymer Network-Stabilized Liquid Crystals	I. Dierking	167
New Trends in Colloidal Liquid Crystals Based on Mineral Moieties	J.-C. P. Gabriel, P. Davidson	9
1999		
Wafer Bonding and Layer Splitting for Microsystems	Q.-Y. Tong, U. M. Gösele	1409
Nuclear Magnetic Resonance Characterization of Self-Assembled Nanostructured Materials	L.-Q. Wang, G. J. Exarhos, J. Liu	1331
Photoluminescence from Single Semiconductor Nanostructures	S. A. Empedocles, R. Neuhauser, K. Shimizu, M. G. Bawendi	1243
Rigid Macroporous Polymer Monoliths	E. C. Peters, F. Svec, J. M. J. Fréchet	1169
New Developments in Microporous Materials	F.-S. Xiao, S. Qiu, W. Pang, R. Xu	1091
Superlattices and Microstructures of Dielectric Materials	N.-B. Ming	1079
Computer-Assisted Search for Nonlinear Optical Crystals	C. Chen, N. Ye, J. Lin, J. Jiang, W. Zeng, B. Wu	1071
Zeolite Membranes	A. Tavolaro, E. Drioli	975
Polarized Luminescence from Oriented Molecular Materials	M. Grell, D. D. C. Bradley	895
Cracks and Atoms	D. Holland, M. Marder	793
Banana-Shaped Compounds—A New Field of Liquid Crystals	G. Pelzl, S. Diele, W. Weissflog	707
Energy Level Alignment and Interfacial Electronic Structures at Organic/Metal and Organic/Organic Interfaces	H. Ishii, K. Sugiyama, E. Ito, K. Seki	605
Transient Electroluminescence from Poly(phenylenevinylene)-Based Devices	V. Savvateev, A. Yakimov, D. Davidov	519
Bacteriorhodopsin Thin Film Assemblies—Immobilization, Properties, and Applications	J.-A. He, L. Samuelson, L. Li, J. Kumar, S. K. Tripathy	435
Lasers Based on Semiconducting Organic Materials	N. Tessler	363
Silicon–Germanium Strained Layer Materials in Microelectronics	D. J. Paul	191
Deposition of Powder Phosphors for Information Displays	K. Y. Sasaki, J. B. Talbot	91
Tetrathiafulvalenes as π -Electron Donors for Intramolecular Charge-Transfer Materials	M. R. Bryce	11
1998		
Poly(sulfur nitride): The First Polymeric Metal	A. J. Banister, I. B. Gorrell	1415
From Molecules to Materials: Current Trends and Future Directions	A. P. Alivisatos, P. F. Barbara, A. W. Castleman, J. Chang, D. A. Dixon, M. L. Klein, G. L. McLendon, J. S. Miller, M. E. Thompson	1297
Surface-Fluorinated Coatings	D. Anton	1197
Nylons from Nature: Synthetic Analogs to Spider Silk	J. P. O'Brian, S. R. Fahnestock, Y. Termonia, K. H. Gardner	1185
Nanoparticles: Uses and Relationships to Molecular Cluster Compounds	N. Herron, D. L. Thorn	1173
Novel Nanocarbons—Structure, Properties, and Potential Applications	S. Subramoney	1157
Borate Materials in Nonlinear Optics	P. Becker	979
Atom Transfer Radical Polymerization and the Synthesis of Polymeric Materials	T. E. Patten, K. Matyjaszewski	901

Title	Authors	Page
Soft and Wet Materials: Polymer Gels	Y. Osada, J.-P. Gong	827
Insertion Electrode Materials for Rechargeable Lithium Batteries	M. Winter, J. O. Besenhard, M. E. Spahr, P. Novák	725
Nonlinear Optical Properties of Correlated Chromophores in Organic Mesoscopic Superstructures	K. Clays, E. Hendrickx, T. Verbiest, A. Persoons	643
Metal Clusters and Colloids	G. Schmid, L. F. Chi	515
Polymer Electrolytes for Lithium-Ion Batteries	W. H. Meyer	439
Organic Field-Effect Transistors	G. Horowitz	365
Heteroatom-Based Dendrimers	H. Frey, C. Lach, K. Lorenz	279
Metalloendrimers: Structural Diversity and Functional Behavior	C. Gorman	295
Amphiphilic Block Copolymers in Structure-Controlled Nanomaterial Hybrids	S. Förster, M. Antonietti	195
The Chemistry of Conducting Polythiophenes	R. D. McCullough	93
Structural Analysis of Self-Assembling Nanocrystal Superlattices	Z. L. Wang	13
1997		
Does Microgravity Influence Self-Assembly?	Ö. Dag, H. Ahari, N. Coombs, T. Jiang, P. P. Aroca-Ouellette, S. Petrov, I. Sokolov, A. Verma, G. Vovk, D. Young, G. A. Ozin, C. Reber, Y. Pelletier, R. L. Bedard	1133
Electrical and Optical Properties of Processable Polythiophene Derivatives: Structure-Property Relationships	M. Leclerc, K. Faid	1087
Self-Organized Quantum Wires and Dots in III-V Semiconductors	H. Asahi	1019
Giant Magnetoresistance, Charge-Ordering, and Related Aspects of Manganates and Other Oxide Systems	C. N. R. Rao, A. K. Cheetham	1009
Entrapment of Biocatalysts in Hydrophobic Sol-Gel Materials for Use in Organic Chemistry	M. T. Reetz	943
Solid-State Carbon Nitrides	J. V. Badding	877
Dopant Electromigration in Semiconductors	D. Cahen, L. Chernyak	861
Surface Chemistry of Luminescent Silicon Nanocrystallites	M. J. Sailor, E. J. Lee	783
Molecular Recognition of Organized Assemblies via Hydrogen Bonding in Aqueous Media	C. M. Paleos, D. Tsiorvas	695
B/C/N Materials Based on the Graphite Network	M. Kawaguchi	615
Aromatic Poly(1,3,4-oxadiazole)s as Advanced Materials	B. Schulz, M. Bruima, L. Brehmer	601
Donor-Linked Fullerenes: Photoinduced Electron Transfer and 1st Potential Application	H. Imahori, Y. Sakata	537
Materials Chemistry and Thermodynamics of $\text{REBa}_2\text{Cu}_3\text{O}_{7-x}$	J. L. MacManus-Driscoll	457
Phasmids and Polycatenar Mesogens	H.-T. Nguyen, C. Destrade, J. Malthête	375
Polypeptide Materials: New Synthetic Methods and Applications	T. J. Deming	299
Microscopy of Structural Ceramics	M. Rühle	195
Laser Ablation of Doped Polymer Systems	T. Lippert, A. Yabe, A. Wokaun	105
Polyelectrolyte-Surfactant Complexes in the Solid State: Facile Building Blocks for Self-Organizing Materials	C. K. Ober, G. Wegner	17
1996		
The Design and Synthesis of Heterogeneous Catalyst Systems	N. Herron, W. E. Farneth	959
Tools and Strategies for Developing New Materials	T. M. Gür	883
Organic Molecular Beam Deposition of Metallophthalocyanines for Opto-electronics Applications	A. Yamashita, T. Hayashi	791
Golden Interfaces: The Surface of Self-Assembled Monolayers	E. Delamarche, B. Michel, H. A. Biebuyck, C. Gerber	719
Langmuir Monolayers and Langmuir-Blodgett Multilayers Containing Macroyclic Ionophores	I. K. Lednev, M. C. Petty	615
InGaIN and II-VI Systems for Blue-Green Light-Emitting Devices	T. Matsuoka	469
Cascading of Second-Order Nonlinearities in Polar Materials	C. Bosshard	385
Angle-Scanned Photoelectron Diffraction: Probing Crystalline Ultrathin Films	G. Granozzi, M. Sambi	315
Biodegradable Polymeric Materials	E. Chiellini, R. Solaro	305
Layered and Pillared Metal(IV) Phosphates and Phosphonates	G. Alberti, M. Casciola, U. Constantino, R. Vivani	291
Transition Metal Based Ionic Mesogens	F. Neve	277
Dimeric Tetraphiafulvalenes: New Electron Donors	T. Otsubo, Y. Aso, K. Takimiya	203
Fast Li ⁺ Conducting Ceramic Electrolytes	G.-y. Adachi, N. Imanaka, H. Aono	127
Photorefractive Polymers and Composites	Y. Zhang, R. Burzynski, S. Ghosal, M. K. Casstevens	111
Polymer Layered Silicate Nanocomposites	E. P. Giannelis	29
Self-Assembling Frameworks: Beyond Microporous Oxides	C. L. Bowes, G. A. Ozin	13

Title	Authors	Page
1995		
Doped and Heteroatom-Containing Fullerene-like Structures and Nanotubes	R. Tenne	965
Optically Polarized ^{129}Xe in NMR Spectroscopy	T. Pietraß, H. C. Gaede	826
Precursor-Derived Covalent Ceramics	J. Bill, F. Aldinger	775
Dielectrics for Field Effect Technology	P. Balk	703
Substituted Rigid Rod-Like Polymers-Building Blocks for Photonic Devices	D. Neher	691
The Colloid Chemical Approach to Nanostructured Materials	J. H. Fendler, F. C. Meldrum	607
Polymeric Electro-Optic Modulators: Materials Synthesis and Processing	L. R. Dalton, A. W. Harper, B. Wu, R. Ghosn, J. Laquindanum, Z. Liang, A. Hubbel, C. Xu	519
Scheibe Aggregates	D. Möbius	437
Metallomesogenic Polymers	L. Oriol, J. Serrano	348
Conjugated Polymers and Oligomers: Designing Novel Materials Using a Quantum-Chemical Approach	J.-L. Brédas	263
Zeolites and Zeotypes as Catalysts	A. Corma, A. Martinez	137
Mechanical Properties of Ultrahigh Boron Steels	J. A. Jiménez, G. González-Doncel, O. A. Ruano	130
Sol-Gel Processing of Optical and Electrooptical Materials	D. Levy, L. Esquivias	120
CVD of Covalent Compounds and High- T_c Superconductors	C. Gómez-Aleixandre, O. Sanchez, J. M. Albella, J. Santiso, A. Figueras	111
Electron Microscopy Studies of Amphiphilic Self-Assemblies on Vitreous Ice	J. Majewski, L. Margulis, I. Wissbuch, R. Popovitz-Biro, T. Arad, Y. Talmon, M. Lahav, L. Leiserowitz	26
Raman Scattering in Zeolites and Molecular Sieves	C. Brémard, D. Bougeard	10
1994		
Characterizing Materials with Cyclic Voltammetry	J. F. Rusling, S. L. Suib	922
Crystal Structures of Copper-Based High- T_c Superconductors	M. A. G. Aranda	905
Conducting Stacked Metallophthalocyanines and Related Compounds	M. Hanack, M. Lang	819
Raman Scattering in C_{60} Fullerenes and Fullerides	H. Kuzmany, M. Matus, B. Burger, J. Winter	731
MOCVD Routes to Thin Metal Oxide Films for Superconducting Electronics	D. L. Schulz, T. J. Marks	719
Molecular Magnetism: A Basis for New Materials	D. Gatteschi	635
Novel Ultrahard Materials	R. Riedel	549
Tuning Schottky Barriers by Atomic Layer Control at Metal-Semiconductor Interfaces	F. Flores, R. Miranda	540
Starburst/Cascade Dendrimers: Fundamental Building Blocks for a New Nanoscopic Chemistry Set	D. A. Tomalia	529
BiSrCaCuO High- T_c Superconductors	P. Majewski	460
Oligomeric Tetraphiafulvalenes: Extended Donors for Increasing the Dimensionality of Electrical Conduction	M. Adam, K. Müllen	439
Interpreting STM and AFM Images	S. N. Magonov, M.-H. Whangbo	355
Shock Compression Synthesis of Diamond	A. B. Sawaoka, M. Takamatsu, T. Akashi	346
Fluorescence and Excited-State Structure of Conjugated Polymers	Z. G. Soos, D. S. Galvao, S. Etemad	280
Polymeric Gas Separation Membranes	E. R. Hensema	269
Disorder in Charge Transport in Doped Polymers	M. Van der Auweraer, F. C. De Schryver, P. M. Borsenberger, H. Bässler	199
Soluble Oligo- and Polyphenylenes	J. M. Tour	190
Fascinating Phenomena in Surfactant Chemistry	H. Hoffmann	116
Inorganic–Organic Polymers	H. R. Allcock	106
Metathesis Polymerization: ROMPing Towards New Materials	V. C. Gibson	37
Ring-Opening Polymerization and Ring-Closing Depolymerization	H. Höcker, H. Keul	21
Template-Directed Nucleation and Growth of Inorganic Materials	R. Heywood, S. Mann	9
1993		
Crystal Structures of Oligothiophenes and Their Relevance to Charge Transport	S. Hotta, K. Waragai	896
Sensor Materials for Solvent Vapor Detection—Donor–Acceptor and Host–Guest Interactions	F. L. Dickert, A. Haunschild	887
Molecular Materials for Second-Order Nonlinear Optical Applications	S. R. Marder, J. W. Perry	804
Functionalized Langmuir–Blodgett Films—Toward the Construction of Molecular Devices	H. Tachibana, M. Matsumoto	796
Electrorheological Fluids—Structure and Dynamics	T. C. Halsey	711
STM-Based Nanotechnology: The Japanese Challenge	F. Grey	704
Structural Studies on Superconducting Materials and Fullerites by Electron Microscopy	G. Van Tendeloo, S. Amelinckx	620
Microemulsions and Organogels: Properties and Novel Applications	G. D. Rees, B. H. Robinson	608

Title	Authors	Page
Optical Nonlinearity: Phenomena, Applications, and Materials	W. Nie	520
Scanning Acoustic Microscopy—Recent Applications in Materials Science	R. J. M. da Fonseca, L. Ferdj-Allah, G. Despaux, A. Boudour, L. Robert, J. Attal	508
Sol-Gel Processing of Transition-Metal Alkoxides for Electronics	G. R. Lee, J. A. Crayston	434
Hybrid Nanocomposite Materials—Between Inorganic Glasses and Organic Polymers	B. M. Novak	422
Organic Materials for Third-Order Nonlinear Optics	H. Singh Nalwa	341
Conducting Polymers Intercalated in Layered Solids	E. Ruiz-Hitzky	334
Review of Polymer Physics in 1992	B. Ewen	260
Polymeric Materials: A Review of Progress in 1992	W. H. Meyer	254
Review of Polymer Synthesis in 1992	A.-D. Schlüter	246
Computer-Aided Materials Design for Semiconductors	T. Ito, T. Ohno, K. Shiraishi, E. Yamaguchi	198
Compound Semiconductor Ultrathin Films—Characterization and Control of Growth	N. Inoue	192
Fibers for Optical Communications	S. Takahashi	187
High- T_c Superconducting Thin Films	S. Miyazawa, Y. Tazoh, H. Asano, Y. Nagai, O. Michikami, M. Suzuki	179
Organic Materials for Nonlinear Optics	T. Kaino, S. Tomaru	172
Ferroelectric Liquid Crystals with an Alkanoyl Group	S. Kobayashi, S. Ishibashi, K. Takahashi, S. Tsuru, F. Yamamoto	167
Mechanical Alloying of Titanium-Based Alloys	C. Suryanarayana, F. H. Froes	96
Quantized Semiconductor Particles—A Novel State of Matter for Materials Science	H. Weller	88
Growth of GaAs and AlGaAs by Chemical Beam Epitaxy—Precursor Requirements and Recent Developments	A. C. Jones	81
Progress Toward Biologically Produced Biodegradable Thermoplastics	Y. Poirer, D. E. Dennis, C. Nawrath, C. Somerville	30
Direct Synthesis of Semiconductor Quantum-Wire and Quantum-Dot Structures	R. Nötzel, K. H. Ploog	22
Polyrotaxanes: Molecular Composites Derived by Physical Linkage of Cyclic and Linear Species	H. W. Gibson, H. Marand	11
1992		
Advanced Materials for GaAs Microwave Devices	R. S. Smith, I. G. Eddison	786
Diagnostics and Modeling of Silane and Methane Plasma CVD Processes	P. B. Davies, P. M. Martineau	729
Spin Transition Molecular Materials for Displays and Data Recording	O. Kahn, J. Kröber, C. Jay	718
Nanochemistry: Synthesis in Diminishing Dimensions	G. A. Ozin	612
Molecular Engineering of Side-Chain Liquid-Crystalline Polymers by Living Cationic Polymerization	V. Percec, D. Tomazos	548
Atomistic Modeling of Materials Properties by Monte Carlo Simulation	K. Binder	540
Ab-Initio Computer Modeling of Semiconductor Surfaces	G. P. Srivastava, B. Jones	482
Nanostructured Materials	H. Gleiter	474
Nonlinear Optical Materials for Integrated Optics: Telecommunications and Sensors	R. Dorn, D. Baums, P. Kersten, R. Regener	464
CHEMFET Devices for Biomedical and Environmental Applications	A. Barbaro, C. Colapicchioni, E. Davini, G. Mazzamurro, A. Piotto Piotto, F. Porcelli	402
A Novel Tool for Surface Electronic Structure Calculations—Insight into Surface Self-Diffusion on Metals	P. J. Feibelman	396
Raman Scattering in High- T_c Superconductors	C. Thomsen	341
Defect Spectroscopy in Semiconductors	H. G. Grimmeiss, M. Kleverman	261
Molecular Relaxations in Highly Oriented Polymer Structures	D. Eichenauer, H. Jung	215
Synthesis, Processing, and Properties of Thermotropic Liquid-Crystal Polymers	H. N. Yoon, L. F. Charbonneau, G. W. Calundann	206
Miscible Polymer Blends: Local Interaction Energy Theories and Simulations	S. H. Jacobson, D. J. Gordon, G. V. Nelson, A. Balazs	198
Ferroelectric Liquid Crystals in High Information Content Displays	C. Escher, R. Wingen	189
Heat-Reflecting Systems for Automotive Glazing	G. Grolig, K.-H. Kochem	179
Covalent High-Performance Caramics	W. D. G. Böcker, R. Hamminger, J. Heinrich, J. Huber, A. Roosen	169
The Stability of Poled Nonlinear Optical Polymers	H.-T. Man, H. N. Yoon	159
Polymers for Nonlinear Optics	A. Buckley	153
High-Performance Polymers	F. Herold, A. Schneller	143
Nuclear Magnetic Resonance Imaging of Polymers and Polymer Composites	P. Jezzard, C. J. Wiggins, T. A. Carpenter, L. D. Hall, P. Jackson, N. J. Clayden, N. J. Walton	82
The Function of Polymers in the Tape Casting of Alumina	J. Böhnlein-Mauß, W. Sigmund, G. Wegner, W. H. Meyer, F. Heßel, K. Seitz, A. Roosen	73
Hydrogen in Semiconductors: Crystal Growth and Device Processing	S. Pearton, M. Stavola, J. W. Corbett	33

Title	Authors	Page
Electrosynthesized Thin Films of Group II–VI Compound Semiconductors, Alloys, and Superstructures	K. Rajeshwar	23
Intrazeolite Topotaxy	G. A. Ozin, S. Özkar	11
1991		
Correlation Between Primary Chemical Structure and Property Phenomena in Polycondensates	K. Sommer et al.	590
Organometallic Molecular Precursors for Low-Temperature MOCVD of III–V Semiconductors	F. Maury	542
Langmuir–Blodgett Membranes for Separation and Sensing	B. Tieke	532
Synthetic Routes to High Surface Area Non-Oxide Materials	R. W. Chorley, P. W. Lednor	474
Chemical Interactions in GaAs–LEC Crystal Growth	U. Lambert, U. Wiese	429
Optical Applications of Bacteriorhodopsin and Its Mutated Variants	C. Bräuchle, N. Hampf, D. Oesterhelt	420
High-Resolution Electron Microscopy of Semiconductors and Metals	C. W. T. Bulle-Lieuwma, W. Coene, A. F. de Jong	368
Designing Luminescent Materials	M. Bredol, U. Kynast, C. Ronda	361
Nanocrystalline Materials for Video Recorder Heads	H. J. de Wit, C. H. M. Witmer, F. W. A. Dirne	356
Silicon Molecular Beam Epitaxy	D. J. Gravesteijn, G. F. A. van de Walle, A. A. van Gorkum	351
Electrocatalytic Hydride-Forming Compounds for Rechargeable Batteries	P. H. L. Notten, R. E. F. Einerhand	343
Advanced Dielectrics: Bulk Ceramics and Thin Films	B. Hennings, M. Klee, R. Waser	334
Thermal Stability of Langmuir–Blodgett and Self-Assembled Films:	A. Ulman	298
A Possible Scenario for Order–Disorder Transitions		
Defect Chemistry of the High- T_c Superconductors	J. Maier, G. Pfundtner	292
Ladder Polymers: The New Generation	A.-D. Schlüter	282
Solid-State NMR of Heterogeneous Materials	B. Blümich	237
DCNQIs—New Electron Acceptors for Charge-Transfer Complexes and Highly Conducting Radical Anion Salts	S. Hünig, P. Erk	225
Defects in Continuous Media	A. Weber, E. Bodenschatz, L. Kramer	191
The Synthesis of Polymer Supports	R. Arshady	182
Dynamic Observations of Relaxation Processes in Semiconductor Heterostructures	R. Hull, J. C. Bean	139
Organic Solar Cells	D. Wöhrle, D. Meissner	129
Perfluorochemicals: Blood Substitutes and Beyond	M. C. Lowe	87
Optical and Surface-Analytical Method for the Characterization of Ultrathin Organic Films	C. Bubeck, D. Holtkamp	32
Preformed Polymers for Langmuir–Blodgett Films—Molecular Concepts	F. Embs, D. Funhoff, A. Laschewski, U. Licht, H. Ohst, W. Prass,	25
Structural Characterization of Monolayers at the Air–Water Interface	H. Ringsdorf, G. Wegner, R. Wehrmann	
Ultrathin Organic Films: Molecular Architectures for Advanced Optical, Electronic, and Bio-Related Systems	D. Möbius, H. Möhwald	19
	H. Fuchs, H. Ohst, W. Prass	10
1990		
The Performance of Superalloys	T. B. Gibbons	583
Self-Assembled Monolayers of Alkyltrichlorosilanes: Building Blocks For Future Organic Materials	A. Ulman	573
Carbon Fibers	W. Ruland	528
Ion Beam Modified Polyimide	J. Davenas, G. Boiteux	521
High- T_c Superconductors	H. Gogner, H. E. Hoenig	473
III/V Semiconductors: Substrate Materials and Epitaxy	G. Packeiser	464
Piezoelectric Ceramics	H. Thomann	458
Photoreactive Polymers for Electronics	R. Rubner	452
Chemical Modification of Polymeric Materials by Physiologically Active Substances	L. I. Valuev, N. A. Platé	405
Ceramics from Organometallic Polymers	M. Peuckert, T. Vaahs, M. Brück	398
Conducting Polymers—Thirteen Years of Polyacetylene Doping	S. Roth, M. Filzmoser	356
The Potential of the Graphite Lattice	K. J. Hüttlinger	349
Layered Lead Cuprates: Promising High- T_c Superconductors	B. Raveau, C. Michael, M. Hervieu, D. Groult, J. Provost	299
Silica Surface Sensitization and Chemical Sensors	P. Clechet, N. Jaffrezic-Renault	293
Organic Semiconductors for New Electronic Devices	G. Horowitz	287
Polymers with Ionic Conductivity	M. Armand	278
High-Temperature Superconductivity: Four Years Since Bednorz and Müller	P. M. Grant	232
Langmuir–Blodgett Films for Electronic Applications	B. Tieke	222
Energetic Materials	S. Iyer, N. Slagg	174

Title	Authors	Page
Advanced Materials for Reversible Optical Storage	E. M. Engler	166
Electrocermics: Characterization by Impedance Spectroscopy	J. T. S. Irvine, D. C. Sinclair, A. R. West	132
X-ray Techniques Using Synchrotron Radiation in Materials Analysis	B. Lengeler	123
Surface Modification with Lasers	P. B. Comita	82
Solid State NMR Spectroscopy in Polymer Science	B. Blümich, A. Hagemeyer, D. Schaefer, K. Schmidt-Rohr, H. W. Spiess	72
The Transduction of Host–Guest Interactions into Electronic Signals by Molecular Systems	D. N. Reinhoudt, E. J. R. Sudhölter	23
Superconductivity—Then and Now	H. Jaeger	16
Electrochromic Materials for Optical Switching Devices	K. Bange, T. Gambke	10
1989		
Polysilanes—A New Look at Some Old Materials	R. D. Miller	433
Structural Characterization of Non-Oxide Chalcogenide Glasses Using Solid State NMR	H. Eckert	423
High-Performance Silicon Nitride Materials	C. Boberski, R. Hammlinger, M. Peuckert, F. Aldinger, R. Dillinger, J. Heinrich, J. Huber	378
Polymer Optical Fibers and Nonlinear Optical Device Principles	W. Groh, D. Lupo, H. Sixl	366
Liquid Crystals—New Compounds, New Applications	R. Eidenschink	338
Superfine Oxide Powders—Flame Hydrolysis and Hydrothermal Synthesis	G. W. Krichbaum, P. Kleinschmit	330
Liquid Crystalline Elastomers	R. Zentel	321
Metal Organic Chemical Vapor Deposition (MOCVD) Perspectives and Prospects	J. O. Williams	282
Structure-Directed Synthesis of New Organic Materials	F. H. Kohnke, J. P. Mathias, J. F. Stoddart	275
Tailoring Semiconductor Crystals to Atomic Dimensions	B. A. Joyce	270
Materials for the Next Millenium	E. D. Hondros, E. Bullock	260
Advanced Catalysts: Interfaces in the Physical and Biological Sciences	J. M. Thomas	251
Production and Application of Rapidly Quenched Materials	H. Warlimont	225
Dichroic Dyes and Liquid Crystalline Side Chain Polymers	H.-W. Schmidt	218
Generation of Complex Metal Oxides by Aerosol Processes: Superconducting Ceramic Particles and Films	T. T. Kodas	180
Challenges in Materials for Health Care Applications	D. F. Williams	164
Aerospace Materials Research Opportunities	M. Salkind	157
The Kevlar Story—An Advanced Materials Case Study	D. Tanner, J. A. Fitzgerald, B. R. Phillips	151
Materials Processing—A Key Factor	W. Michaeli	146
Materials Issues in Electronic Systems	D. W. McCall	142
Materials for Biomedical Applications—Bone and Joint Replacement	G. Heimke	122
Functionalized Conducting Polymers—Towards Intelligent Materials	F. Garnier	117
Modeling Organic Surfaces with Self-Assembled Monolayers	C. D. Bain, G. M. Whitesides	110
Advanced Zeolite Materials Science	G. A. Ozin, A. Kuperman, A. Stein	69
Magneto-Optical Recording and Data Storage Materials	F. J. A. M. Greidanus, S. Klahn	45
Surface Chemistry with the Scanning Tunneling Microscope	J. P. Rabe	13
Advanced Ceramics for Biomedical Applications	G. Heimke	7
1988 [a]		
New Organic Superconductors	H. Inokuchi	1817
Microgels—Polymers with a Special Molecular Architecture	M. Antonietti	1813
New Donors for Molecular Organic (Super)Conductors and Ferromagnets	Z. Yoshida, T. Sugimoto	1633
From Electronic/Ionic Conductors to Superconductors: Control of Materials Properties	R. Schöllhorn	1447
Intelligent Materials—A New Frontier	H. Yanagida	1443
Polymeric Photoconductors—New Concepts	D. Haarer, A. Blumen	1253
From Carbon Beams to Diamond Films	S. R. Kasi, Y. Lifshitz, J. W. Rabalais, G. Lempert	1245
BMFT Materials Research Program	D. Kutschke	1243
New Methods for the Anionic Polymerization of α -Activated Olefins	M. T. Reetz	1026
Advanced Materials by Powder Metallurgy	W. A. Kaysser, G. Petzow	1021
Liquid Crystals—State of the Art <i>and the following Nobel Lecture:</i>	H. Finkelmann	1019
Perovskite-Type Oxides—The New Approach to High- T_c Superconducting Controlling the Microstructure of Monomolecular Layers	J. G. Bednorz, K. A. Müller H. Möhwald	757 750

[a] Page numbers for 1988 correspond to *Angew. Chem.* **1998**, 100.