

Table of Contents

Foreword

Hydrothermal Processing of Perovskite PbTiO₃ Powders S.I. Hirano, T. Yogo, W. Sakamoto and A. Tosa	1
Extraction of Binders with Supercritical Carbon Dioxide T. Chartier, E. Delhomme, J.F. Baumard, P. Marteau and R. Tufeu	4
Nanostructured Ceramics via Microemulsion Processing Routes J.L. Wang, G.K. Lim, C.L. Ong, S.C. Ng, C.H. Chew and L.M. Gan	8
Novel Ceramic Processing Methods Using Responsive Polymers L. Bergström, E. Carlström and R. Carlsson	12
Direct Study of Size Effect at Gel-Sol Preparation of Stabilized Zirconia in the ZrO₂-Yb₂O₃ System with use of Synchrotronic Irradiation A.Y. Olenin, V.Y. Shevchenko, G.S. Yur'ev and O.V. Malochkin	14
Urea-Formaldehyde as a Precursor for the Preparation of Alumina-Zirconia Composites by Sol-Gel Polymeric Route D.M. Ibrahim and H.S. Choi	18
Urea Formaldehyde as a Precursor for the Preparation of Titania by Sol Gel Polymeric Route D.M. Ibrahim, T. Khalil and A.A. Mostafa	22
PZT-Piezoceramic Derived from Emulsion Powder F. Hutter, D. Sporn, T. Erny, K. Lubitz and H.V. Zychlinski	26
Sol-Gel Method used for Synthesis of Ceramic Pigments S. Eric-Antonic, L. Kostic-Gvozdenovic, R. Dimitrijevic, S. Despotovic and L. Filipovic-Petrovic	30
Preparation of Bismuth Layered Oxide Powders by Chemical Routes: Molten Salts and Sol-Gel Syntheses F. Soares, J.H. Yi, M. Manier, P. Thomas, J. Mercurio and B. Frit	34
Hafnia and Hafnia-Zirconia Mixed Oxide Ultra Spherical Microspheres Made by a Sol-Gel-Vibrational Dropping Process T. Brandau and E. Brandau	38
Aluminium Titanate-25vol% Mullite Composite Powder Obtained by Different Processing Methods Y.X. Huang, A.M.R. Senos and J.L. Baptista	41
Synthesis and Sintering Behavior of Nanocrystalline ZrO₂ - 3 mol% Y₂O₃ Powders V.V. Srdić and L. Radonjić	45
Epitaxial Zirconia Films on (11-20) Planes of Sapphire P. Ruin, A. Dager, P. Villechaize, R. Guinebretière, A. Lecomte and B. Frit	49
Effect of Praseodymium Doping on the Properties of Ca-FSZ Obtained by Gel Methods J. Badenes, M. Llusar, J.B. Vicent, E. Cordoncillo, J.B. Carda and G. Monrós	53
Study of Synthesis Methods to Obtain the Ceramic Pigment Pink Coral, Fe-ZrSiO₄ I. Núñez, J.V. Poré, E. Cordoncillo, V. Esteve and J.B. Carda	57
Chemical Preparation of Pb(Zn_{1/3}Nb_{2/3})O₃ - Pb(Fe_{1/2}Nb_{1/2})O₃ Powders from Nitrate Solutions Y. Yoshikawa	61
Aspects Regarding the Formation of the Spinel Phase in the MeO-Al₂O₃ and MeO-TiO₂ Systems I. Lazău, C. Păcurariu and D. Becherescu	65
Effect of seeding on α-Al₂O₃ Powder Formation from Bayerite and Bohemite H. Balmori-Ramírez and A. Salvador-Morales	69
Synthesis by Coprecipitation and Characterisation of Materials Obtained from the System NiO-Al₂O₃-SiO₂ E. Tudorache, V. Burghilea and M. Herman	73
Wet Chemical Preparation of Doped Barium Titanate Powders and Ceramics S. van der Gijp, A.J.A. Winnubst and H. Verweij	77
Solid Solution La_{2-x}Sr_xNiO₄ Preparation by the Citrate Method S.P. Tolochko, L.V. Makhnach, I.F. Kononyuk, V.V. Vashook, V.A. Lomonosov, J. Hauck and H. Altenburg	81

A New Solution Way to Prepare Hydroxyapatite Powders W.J. Weng	85
Powders Agglomeration Grade in the $\text{ZrO}_2\text{-Y}_2\text{O}_3$ Coprecipitation Process M. Lauci	89
Preparation Conditions and Sintering Ability of Ceramic Powders W. Pyda	93
High Stability Ceramic Pigments A. Balogh	97
Stabilisation of Transition Aluminas by Alkaline Earth Ions A. Douy	101
Preparation and Characterization of Metastable $\text{ZrO}_2/\text{Al}_2\text{O}_3$ Solid Solution S. Moreau, M. Gervais and A. Douy	105
Controlled Morphology of Nickel Manganite Powders C. Chanel, S. Fritsch, R. Legros and A. Rousset	109
Spinel Pigments in the $\text{ZnO-CoO-Al}_2\text{O}_3\text{-Cr}_2\text{O}_3$ System Prepared from Organometallic Precursors C. Păcurariu, M. Ștefănescu, I. Lazău and M. Bîrzescu	113
Hydrothermal and Activated Solid State Syntheses of SrTiO_3 Fine Powders I.F. Kononyuk, V.A. Lomonosov, A.S. Panasyugin, I.I. Yushkevich, Y.G. Zonov, H. Altenburg, C. Magerkurth, J. Plewa and M. Ueltzen	117
Mechanism of the Hydrothermal Crystallisation of Zirconia M.M. Bucko and K. Haberko	121
Hydrothermal Synthesis and Properties of BaTiO_3 Powder Destined for PTCR Ceramics S. Urek and M. Drofenik	125
Hydrothermal Synthesis of Colloidal Zirconia H. Vesteghem, I. Charissou and H. Reverón	129
Cerium Stabilized Zirconia by Mixing Hydrothermally Synthesized Monoclinic Zirconia with Cerium Nitrate T. Poirier, H. Vesteghem and A.R. Di Giampaolo	133
Synthesis and Growth Mechanism of $\text{ThO}_2\text{-W}$ Nanocomposite Powder X. Devaux and A. Thomy	137
Laser Synthesis of Nanometric Si/C/O Powders from an Aerosol of Hexamethyldisiloxane S. Fusil, X. Armand, N. Herlin-Boime and M. Cauchetier	141
Calorimetric Study of the Thermal Induced Transformations of Ultrafine Silicon Carbide Powder Produced by RF Glow Discharge J. Costa, J.J. Suñol, J. Saurina, G. Viera, S. Martínez, E. Bertran and P. Roura	145
Reactions between SiCl_4 and NH_3 Leading to the Formation of Silicon Nitride Powders G. Ziegenbalg, T. Focke, H. Holldorf, R. Brink and H. Lange	149
Nanosize Powders Prepared by Flame Pyrolysis J. Böer and W. Burekhardt	153
Novel Ceramic Matrix Nanocomposite Powders Containing Carbon Nanotubes C. Laurent, A. Peigney, K.B. Kim and A. Rousset	157
Production of Nanosized Zirconia-Particles by CO_2 Laser Evaporation G. Michel, G. Staupendahl, G. Eberhardt, E. Müller and C. Oestreich	161
$\text{Al}_2\text{O}_3\text{-SiC}$ Nanocomposites Obtained through the Dispersion of Nanometric Powders O. Dumitrescu, Y. Jorand and G. Fantozzi	165
The Influence of the Preparation Conditions of Nanocrystalline Zirconia on Powder Processing and Ceramic Properties E. Müller, C. Oestreich, U. Popp, R. Herbig, G. Michel and A. Rendtel	169
Producing Al and Al_2O_3 Nanopowders by Electrical Explosion of Wire Y. Kotov, E.I. Azarkevich, I.V. Beketov, T.M. Demina, A.M. Murzakaev and O.M. Samatov	173
TEM Studies of Nanometric Ceramic Oxide Powders Prepared by Ball-Milling L. Mazerolles and D. Michel	177
Influence of the Synthesis Route on the Characteristics of Zirconia Nanomaterials R.R. Piticescu, T. Șegarceanu, A. Nocivin, S. Begin-Collin and G. Le Caër	181
Ceramics from Fine Plasma-Processed AlN Powder E. Palcevskis, L. Jakobsen, L. Trinkler and U. Ulmanis	185

Characterization of Oxycarbide Glasses Prepared by Melt Solidification R. Ramesh, P. Chevaux, H. Lemercier, M.J. Pomeroy and S. Hampshire	189
Direct Crystallization of BaTiO₃ Glass Ceramics M.R. Todorović, L. Radonjić and J. Dumić	193
Synthesis of Spinel Powders by the Spray Pyrolysis Method D. Janačković, V. Jokanović, L. Kostic-Gvozdenovic, R. Cirjakovic, I. Petrovic-Prelevic and D.P. Uskokovic	197
Synthesis and Characterization of Transition Metal Carbide Whiskers M. Johnsson, N. Ahlén and M. Nygren	201
Ni/Alumina Catalysts Produced by Combustion Synthesis M.C. Greca, M.M. Morelli, A.M. Segadães and C. Moraes	205
Combustion Synthesis of Aluminium Titanate: Thermal Stability A.M. Segadães, M.M. Morelli and R.H.G.A. Kiminami	209
Size Distribution of Ultrafine Spherical Ceramic Powders Obtained by Ultrasonic Spray Pyrolysis V. Jokanović, D. Janačković and D.P. Uskokovic	213
Preparation of LaCrO₃ Based Materials by Autoignition of Citrate- Nitrate Gel K. Zupan, M. Hrovat, D. Kolar and B. Dacar	217
Preparation of Plasma Sprayable β- Whitlockite Powder I. Kotsis	221
Synthesis of LiAlO₂ and LiGaO₂ by Ion Exchange Reaction M.E. Villafuerte-Castrejón, C. Mondragón, A.M. Sánchez-Arjona, M.T. Olguín, P. Bosch and S. Bulbulian	225
Synthesis of Mullite Precursors in Molten Salts Influence of the Aluminium Source of Salt L. Saadi, R. Moussa, A. Samdi and A. Mousset	228
Point Defects Effect on the Sintering of Alumina E. Papin, P. Grosseau, B. Guilhot, M. Benabdesselam and P. Iacconi	232
Modification of the Surface Properties of a Titania Nanopowder by Grafting: A Fourier Transform Infrared Analysis F. Chancel, J. Tribout and M. Baraton	236
The Ceramic Humidity Sensors on the Base of MgAl₂O₄ I.V. Uvarova, I.B. Vynnyk, V.S. Zenkov and M.M. Syrotyuk	240
On Peculiarities of Non-Isothermal Synthesis of fine Ferroelectric Powders A. Ragulya, V. Skorokhod and O. Vasylykiv	244
Effects of Heat Treatments on the Local Order in Si/C/N Nanopowders Studied by X-Ray Photoelectron Spectroscopy C. Sénémaud, A. Gheorghiu, G. Dufour, N. Herlin-Boime and M. Cauchetier	248
Identification of Barium Carbonate in Barium Titanate powders M.C. Blanco López, B. Rand and F.L. Riley	252
Methylene-Blue Adsorption on Latvian Clay Powders A. Ruplis, I. Saveljeva and D. Denisenko	256
Study of Vaporization during Heat Treatment of β-Spodumene and α-Cordierite Sol-Gel Powders L. Lostec, C. Chatillon, C. Gault and T. Chartier	260
HRTEM and XRD Study of the Crystallization of Zirconia Precipitate: an Explanation of the Well Known "Glow Effect" M.C. Silva, G. Trolliard, R. Guinebrière, A. Dauter and B. Frit	264
FT- IR Spectroscopy as a Method for the Study of the Different Crystallization Forms of CaCo₃ B. Plavsic, S. Kobe and B. Orel	268
Improved Characterisation of Ceramic Powder Surfaces - A Comparison of Different FTIR-Spectroscopy Methods H. Ander, J. Lehmann and G. Ziegler	271
Study of Malayaite Synthesis CaSnSiO₅ R. Stefani, E. Longo, P. Escribano, E. Cordoncillo and J.B. Carda	277
Optimisation of Ceramic Suspensions B.J. Briscoe, A.U. Khan, P.F. Luckham and N. Özkan	281

Aqueous Silicon Nitride Suspension: Effect of Surface Treatment on the Rheological and Electrokinetic Properties	
E. Laarz, G. Lenninger and L. Bergström	285
Dispersion, Stabilisation and Casting of Calcium Carbonate Suspensions	
G. Tari, S. Touchal and J.M.F. Ferreira	289
Influence of Iso-Propyl Alcohol Addition on the Electrophoretic Deposition of SiC from a Mixture of Acetone and n-Butylamine	
L. Vandeperre and O. Van der Biest	293
Zirconia-Toughened Alumina (ZTA) with Improved Homogeneity for Tribological Applications	
B. Kerkwijk, A.J.A. Winnubst, A.F. Stassen and H. Verweij	297
The Interaction of Barium Titanate with an Aqueous Suspending Medium	
M.C. Blanco López, B. Rand, F.L. Riley, J. Szépvölgyi and I. Bertóti	301
The Effect of pH on Barium Titanate Aqueous Suspensions	
M.C. Blanco López, B. Rand and F.L. Riley	305
Aqueous Suspensions of $\alpha\text{-Al}_2\text{O}_3/\text{SiC}$ Mixed Systems	
C. Pagnoux, S. Baklouti, T. Chartier and J.F. Baumard	309
Colloidal Processing of Alumina with MgO Additions	
O. Lyckfeldt and J.M.F. Ferreira	313
ESA Measurement of Electrokinetic Properties-Possibilities and Limitations	
R. Herbig and A. Börner	317
Shear-Dependent Behaviour of Calcium Carbonate Aqueous Suspension	
A. Papo, A.D. Pretis, V. Novelli and L. Piani	321
Aqueous Processing of Carbothermally Prepared Ca-α-SiAlON and β-SiAlON Powders: Powder and Suspension Characterisation	
A. Kudyba, M.M. Almeida, H.T. Hintzen, J.C.T. van der Heijde, J. Laven and R. Metselaar	325
Characterization of Alumina Suspension by Electroacoustics	
C. Galassi, E. Roncari, R. Greenwood and A. Piancastelli	329
Characterisation of Organic Additives and their Adsorption Behaviour on Alumina Particle Surfaces using HPLC	
U. Beck, W. Rieß, J. Lehmann and G. Ziegler	333
Development of Ceramic Inks for Jet Printing: Effect of Conductivity	
W.D. Teng and M.J. Edirisinghe	337
Cost Effective Reliable Silicon Nitride for High Performance Structural Applications	
V.K. Pujari and P. Byrne	341
Correlation Between Rheological Behaviour of Alumina Slips and Characteristics of Pressure Cast Bodies	
A. Salomoni, R. Moreno, E. Rastelli, I. Stamenkovic and L. Esposito	346
Industrial Pressure Casting of High Alumina Ceramics	
A.W. Hey, A. Bresciani, L.A. Correia, R. Moreno and A. Salomoni	350
Drying of Aqueous Ceramic Suspensions	
B.J. Briscoe, G. Lo Biundo and N. Özkan	354
Influence of Magnesia on Drying-Shrinkage Behaviour of Alumina	
J.M.F. Ferreira, G. Tari and O. Lyckfeldt	358
Aqueous Tape-Casting of Silicon Carbide	
M.F.L. Granja, F. Doreau and J.M.F. Ferreira	362
Utilisation of Alumina Green Tapes Obtained by Tape Casting of Aqueous Slurry for the Fabrication of Straight or Curved Thin Ceramic Tubes	
F. Doreau and J.M.F. Ferreira	366
Centrifugal Slip Casting of Alumina	
H. Tomaszewski and H. Węglarz	370
Influence of Slip Viscosity on the Mechanical Properties of High Purity Alumina Made by Gelcasting	
R. Waesche and G. Steinborn	374
Improvement of Mechanical Properties of Green Powder Compacts by Using Novel Binder System	
H. Ander, J. Lehmann and G. Ziegler	378

Constant Pressure Filtration of Compressible Ceramic Powder Compacts J.P. Van Houten and A.P.S. Reymer	382
Thermal Resistance of Porous Alumina Ceramics Prepared from the Spray Pyrolyzed Powders K. Okada, H. Ishino, Y. Kameshima, S. Hayashi and A. Yasumori	384
Dry Compaction of Alumina Granules. Influence of the Binder System Glass Transition Temperature G. Bernard-Granger and E. Mercier	388
The Effect of Lubricants on Closure of Large Pores During Powder Compaction N. Golomb, M. Vernak, D.E. Niesz, D.J. Shanefield and A.C. Cuitiño	392
Compacting Mechanisms of a Multicomponent Atomized Ceramic Powder K. Kasaš, J. Ranogajec and R. Marinković-Nedučín	396
Principles of Pulsed Compaction of Ceramic Nano-Sized Powders V.E. Banin, S. Paranin and A. Nozdrin	400
Characterization of PZT Powder Prepared by Spray Drying C. Galassi, I. Roncarati, E. Roncari and C. Capiati	404
The Effect of Dispersion and Atomisation Conditions on the Compaction Response of Silicon Nitride Granules V. Destoop, A. Mertens, W. Hendrix, I. Thijs and J.P. Eraww	408
Measurement on the Effect of Absolute Pressure on the Extrusion Properties of Ceramic Pastes J. Graczyk, J. Reinshagen and W. Gleißle	412
Microstructure Formation in Ceramic Injection Molding W. Pabst, J. Havrda and E. Gregorová	416
The Influence of Binder Properties on the Plasticity and the Properties of Raw Extruded Ceramics A. Ekonomakou, A. Tsetsekou and C.J. Stournaras	420
Lamination of Ceramic Green Tapes M. Piwonski and A. Roosen	424
Extruded Aluminium Nitride-Manufacture, Properties and Application R. Lenk and T. Reetz	428
A Novel Method for Preparing Porous Alumina Objects J.L. Vignes, L. Mazerolles and D. Michel	432
Green Machining of Alumina H.R. Maier and N. Michaeli	436
Effect of Moulding Pressure on Pore Structure O. Széwald, I. Kotsis and T. Korim	440
Near Net Shaping of Complex Components by Hot Moulding R. Lenk	444
Low-Shrinkage Mullite Derived from Filled Polymeric Siloxanes D. Suttor, H.J. Kleebe and G. Ziegler	448
The Peel Adhesion Test for Metal-Ceramic Interfaces E. Breslauer and T. Troczynski	452
Reliability of Ferrite Cores in Applications and Quality Control Tests L.J.M.G. Dortmans, M. Donners, M. de Graaf and G. de With	456
On the Hardness and Brittleness of Ceramics J.B. Quinn and G.D. Quinn	460
Effect of Grinding Parameters on the Strength and Reliability of Al₂O₃ W.H. Tuan and J.C. Kuo	464
Effect of Surface Grinding on the Reliability of Alumina W.H. Tuan and J.C. Kuo	468
The Transition from Palmquist to Median-Radial Crack Systems Within WC-Co Cermets L. Pinot and F. Osterstock	472
Direct Measurement of Friction Applicable to Hot Strength Measurements J.M. Cox, R. Morrell and M.G. Gee	476
Fracture Behaviour of Ceramic Foils in Uni- and Biaxial Tension Y.W. Bao and R.W. Steinbrech	480

A Simple Technique for Fracture Toughness Measurements Using Specimens with Very Thin Notches R.J. Damani	484
Development of a Bending-Test Device for Small Samples T. Lube and M. Manner	488
Crack Branch Lengths and Fracture Feature Sizes in Biaxially Stressed Glass Discs J.B. Quinn	492
Dynamic Fatigue of Glass-Bonded Alumina Ceramics S.M. Barinov, S.V. Orlov and V.Y. Shevchenko	496
Study of R-Curve Behaviour in alumina by In Situ Observation of Stable Indentation Crack Growth M. Boniecki	500
The Non-Linear Mechanical Behaviour of High Performance Refractories R.J. Henderson and H.W. Chandler	504
Mechanical Properties of the Ti_3SiC_2 - TiC Material J. Białoskórski, J. Lis and J. Piekarczyk	508
Slow Crack Growth in 3Y-TZP under Static and Cyclic Fatigue J. Chevalier, C. Olagnon, G. Fantozzi, J.M. Drouin and B. Calès	512
Increase in Fracture Toughness of Monolithic Ceramics by a Partial Reduction Treatment M. Backhaus-Ricoult, V. Guérin, J.-. Deschamps and B. Pellissier	516
Improvement of the Mechanical Properties of Magnetic Ceramics M. Saliceto, J.C. Glandus and P. Fougerolle	520
Thermomechanical Behaviour of TiB_2-AlN Composites S.V. Schneider, M. Desmaison-Brut, G. Richter and C. Gault	524
Mechanical and Microstructural Characterization of SiC Materials Hot-Pressed from α and β Powders M.I. Nieto, R. Moreno and P. Miranzo	528
Fracture Characteristics of Abrasive Particles M.A. Verspui and G. de With	532
Applicability of LEFM to Coarse-Grained Ceramics and Composites A.D. Papargyris and A.I. Botis	536
Fabrication, Structure and Properties of In-Situ Reinforced Si_3N_4 Ceramics from Sol-Gel Derived Oxide-Additive-Coated Powders H. Kan, L. Li, D. Zhang, J. Lin and M.Z. Ge	540
Biaxial Fatigue of Sintered Hydroxylapatite T. Hussain, A. Gholinia and C. Leach	544
Technological Aspects at Development of 2.5 MW Stationary GTE Ceramic Components Structures A.V. Soudarev, V.V. Grishaev, A.A. Souryaninov, A.S. Molchanov and V.Y. Podgorets	548
Anisotropic Deformation and Fracture of Indented PZT J. Calderón Moreno, F. Guiu, M.J. Reece and K.S. Sohn	551
Microstructure Development in Superplastic Silicon Nitride P. Burger, R. Duclos and J. Crampon	555
Observation of Different Interfaces in Silicon Nitride by HRTEM. Influence of the Microstructure on the Creep Properties. G. Bernard-Granger, B. Calès, R. Duclos and J. Crampon	559
Shear Viscosity of an Oxynitride Glass Interlayer T. Rouxel, D. Pradeau, J.L. Besson, P. Verdier and B. Baron	563
Compressive Deformation of Low-Doped Silicon Nitride Ceramics with Different Microstructures P. Burger, R. Duclos and J. Crampon	567
High Temperature Behaviour of a Zircon Ceramic X. Carbonneau, M. Hamidouche, C. Olagnon, G. Fantozzi and R. Torrecillas	571
Compressive Deformation of Fine-Grained Al_2O_3 in a Reducing Environment A. Bataille, J. Crampon and R. Duclos	575
High Temperature Compression Tests Performed on Doped Fuels C. Duguay, A. Mocellin, P. Dehaut and G. Fantozzi	579

30,000-40,000 h) Creep Behavior of an Advanced Si₃N₄ Ceramic K.C. Liu, H.T. Lin, C.O. Stevens and C.R. Brinkman	583
High Temperature Creep of Polycrystalline Mullite J. Calderón Moreno and R. Torrecillas	587
High Temperature Mechanical Properties and Creep Behaviour of Different Mullites C. Baudin, M.I. Osendi, P. Descamps and F. Cambier	591
Thermomechanical Properties and Creep of Mullite from Rapidly Quenched Powders P. Descamps, M. Poorteman and F. Cambier	595
Effect of Specimen Size on Thermal Shock Properties of an Alumina C.K. Lin and T. Kuo	599
Thermal Shock of Ceramic Material: Damage Resistance Parameters and Critical Flaw Size T. Volkov-Husović, R.M. Jančić and Z.V. Popović	603
Quantitative Approach of the Effective Coefficient of Heat Transfer During Quenching Vickers Indented Ceramic Samples O. Vansse, U. Kutschera, B. Legendre and F. Osterstock	607
Toughness and Thermal Shock Resistance of Melt-Textured YBaCuO Ceramic Superconductors F. Tancrét, I. Monot and F. Osterstock	611
Study of the Relationship Between Microstructure, Fatigue and Thermal Shock Behaviour of Si₃N₄ M. Kalantar, J. Dubois, C. Olagnon and G. Fantozzi	615
Thermo-Mechanical Behaviour of Structural Ceramics Submitted to Mild Thermal Shocks J.C. Glandus and F. Hugot	619
Mesoscopic Modeling of the Intergranular Structure of Y₂O₃ Doped Aluminium Nitride and Application to the Prediction of the Effective Thermal Conductivity C. Pélissonnier-Grosjean, D. Jeulin, L. Pottier, D. Fournier and A. Thorel	623
Effect of Particle Size on the Thermal Shock Behaviour of a Zirconia Refractory Partially Stabilised with Magnesia C. Yuan and W.J. Clegg	627
The Effect of Powder Processing Route on the Hydrothermal Degradation of Y-TZP D. Burke and W.M. Rainforth	631
Low Temperature Ageing of 3Y - TZP: Influence of the Microstructure J. Chevalier, J.M. Drouin and B. Cables	635
Thermal Fatigue Behaviour of Controlled Surface Flaws in Alumina M. Saâdaoui, C. Olagnon and G. Fantozzi	639
Microstructural Damage in Hafnium Diboride Under Neutron Irradiation P. Cheminant, X. Deschanel, L. Boulanger and A. Thorel	643
Phase Transformation of Gd₄Al₂O₉ at High Temperature M. Shimada, H. Yamane, H. Takizawa and T. Endo	647
Measurement of Grain Boundary Sliding by Atomic Force Microscopy in Superplastically Deformed Ceramics L. Clarisse, A. Bataille, J. Crampon and R. Duclos	651
Internal Friction Decrease in Silicon Nitride Due to Crystallization of Intergranular Phases G. Roebben, L. Donzel, M. Steen, R. Schaller and O. Van der Biest	655
High Temperature Microplasticity of Fine-Grained Y-TZP Zirconia Studied by Mechanical Spectroscopy L. Donzel and R. Schaller	659
'Photothermal Characterisation of Microelectronics Ceramics at Various Scales' D. Fournier, B. Forget, I. Barbereau, P. Gleyzes, J.B. Daban, C. Pelissonnier, A. Thorel and F. Queyroux	663
High Temperature Tensile Testing Apparatus for Industrial Ceramics Characterization G. Bisson and O. Regent	667
Shape Prediction Procedure for Die Pressed Ceramic compacts N. Özkan and B.J. Briscoe	670
Structure Development During Linear Heating and Rate-Controlled Sintering of Ceramics: Statistical Model and Experiment A. Ragulya, V. Skorokhod and M.G. Burenkov	674

Modelling of Binder Burnout Process for Ceramic Compacts B.J. Briscoe, T. Savvas and N. Özkan	678
Modelling of Thermal Shock Behaviour C. Lunot and I. Alliat	682
Finite Element Modeling of Binder Removal from Ceramic Moldings A. Maximenko and O. Van der Biest	686
Numerical Simulation of Alumina Fracture T. Niezgoda, J. Malachowski and M. Boniecki	690
Rheological Analysis of Stress-Strain Hysteresis in Silicon Nitride at High Temperature G. Roebben, M. Steen and O. Van der Biest	694
Experimentally Verified Numerical Analysis of Internal Thermal Stresses in Alumina Ceramics with Grain Size Effect T. Niezgoda, W. Szymczyk and M. Boniecki	698
Creep Damage Model for Ceramics M. Gutmann, G. Cailletaud and M. Boussuge	702
Stress Distribution in Silicon Nitride Joints with Metallic Interlayers S.P. Kovalev, P. Miranzo and M.I. Osendi	706
Computational Modeling of Sintering Process in Ceramics H. Matsubara and R.J. Brook	710
Modelling of Subcritical Crack Growth in MnZn Ferrites M. Donners, L. Dortmans, G. de With and M. de Graaf	714
Graphic Simulation of STM Images of Si(111)7X7 Surface K.T. Raić, R.M. Šašić and M. Petkovska	718
Conductive Mode Imaging for Grain Boundary Property Determination in Electroceramics J.D. Russell, C. Leach and R. Freer	722
AFM Investigation of Electrical Double Layers on SiO₂ Surfaces G. Hüttel, D. Beyer and E. Müller	726
Quantitative Determination of Density Gradients by Three-Dimensional Computertomography (3D-CT) T. Rabe, J. Goebbels, A. Kunzmann and H. Riesemeier	730
Investigation of Hardness and Elastic Constants on Silicon Nitride Based Composites by Recording Micro Hardness Tester S. Sakaguchi and M. Mizuno	734
Dense and Nanostructured Ceramics by Low-Temperature Pressureless Sintering of Nanosized Y-TZP Powders P. Durán, M. Villegas, F. Capel, J.F. Fernández and C. Moure	739
Synthesis and Characterization of Alumina Matrix Nanocomposites Containing Carbon Nanotubes A. Peigney, C. Laurent and A. Rousset	743
Microstructure and Mechanical Properties of Ti(C,N)-Mo₂C-(Ni,Co) Cermets as a Function of their Initial Chemical Composition T. Cutard, S. Bolognini, G. Feusier, C. Verdon, T. Viatte and W. Benoit	747
Origins and Avoidance of Colour Inhomogeneities in Silicon Nitride Ceramics O. Goeb, M. Herrmann, S. Siegel and P. Obenaus	751
On the Valence States of Yb, Sm and Eu Ions in α-Sialon Based Ceramics Z.J. Shen and M. Nygren	755
Superstructure of C₃S Polymorphs M. Iwashima, T. Shirakami and K. Urabe	759
Stabilised Zirconium Dioxide in the MgO-CeO₂-ZrO₂ Ternary System M. Preda, H.H. Rehner and C. Nicolescu	763
Fanning Laser Light Application to the Characterization of Bi₁₂TiO₂₀ and Bi₁₂SiO₂₀ Crystals L. Preda and I.M. Popescu	767
Solubility of Erbium, Praseodimium and Vanadium in ZrO₂, ZrO₂-CeO₂ and ZrO₂-Y₂O₃ G. Dariol, A. Poletto, F. Genel Ricciardiello and L. Kucich Podda	771
Decomposition of Nitrous Oxide over Perovskite Type Mixed Oxides W. Burckhardt, F. Froehlich and F. Seifert	775

Tie-Lines to β'-sialon in the Si-Al-O-N Phase Diagram M.E. Bowden, G.V. White, G.C. Barris and I.W.M. Brown	779
Properties of Novel Ceramic Materials in the BaO-Al₂O₃-AlN-MgO System with a β-Alumina Type Structure S.R. Jansen, T. van Mol, H.T. Hintzen and R. Metselaar	783
Diffusional Properties of Tic at High Temperatures E.M. Fryt	787
Subsolidus Equilibria in the Sn-Sb-Cu-O System M. Stan, D. Crişan and M. Zaharescu	790
Structural Characterisation of New Y-Si-Al-O-N Oxynitride Glass Ceramics K. Liddell, J. Parmentier, D.P. Thompson, L. Audouin, D. Foster, P. Goursat, N. Schneider, H. Lemerrier, S. Hampshire, W. Young, L.K.L. Falk, P.R. Bodart, R.K. Harris, G. Massouras, J.L. Besson, M. Gonon, J. Descamps and F. Cambier	794
The Driving Force for α-β Transformation in Rare Earth α Sialon Ceramics H. Mandal and D.P. Thompson	798
Novel Calcium Phosphate/Poly lactide Composites: Its In Vitro Evaluation S.B. Cho, M. Kikuchi, Y. Suetsugu and M. Tanaka	802
MoSi₂ Self-Purification Through High-Temperature Synthesis O. Florea and N. Angelescu	806
Thermodynamics and Kinetics of Decomposition of Al₂TiO₅-Base Ceramics V. Buscaglia, P. Nanni and M. Leoni	810
Preparation of Pure B-Phase Glass-Ceramic in the Yttrium SiAlON System H. Lemerrier, R. Ramesh, J.L. Besson, K. Liddell, D.P. Thompson and S. Hampshire	814
Elaboration of Composites by Reactive Sintering of AlB₂ and TiN Powders S.V. Schneider, M. Desmaison-Brut, B. Soulestin and P. Lortholary	818
Study on the Sintering of Aluminium Titanate-Mullite by Using a Constant Heating Rate J.L. dos Santos and R.H.G.A. Kiminami	822
Low-Thermal Expansion Zirconyl Phosphate Ceramic L. Raut, M. Muntean and A. Costache	829
Reaction Kinetic in the ZrO₂ - Li₂O System E. Volceanov, A. Volceanov, A. Pantea and A. Apostol	833
Effect of Isomorphous Substitutions on Crystallization of Fluorrichterite Glasses A.A. Omar, A.W.A. El-Shennawi and E.M. Hamzawi	836
Comparison of Preparation Mechanism of Al₂TiO₅ during Various Heat Treatment Techniques I. Kotsis, T. Korim and M. Enisz	840
A Mechanism for Aluminium Powder Nitridation A. Zymła, V. Zymła and J. Guillot	844
Solid State Reactions in the Sb-Sn-Cu-O System Studied by IR Spectrometry O. Ionescu, R. Marchidan, S. Mihaiu, M. Zaharescu and D. Crişan	848
Solid State Reactions in Al₂TiO₅-Al₆Si₂O₁₃-Al₂O₃ Subsystem, Using Reactive Powders M. Zaharescu, M. Preda, M. Crişan, D. Crişan and N. Dragan	852
Enamels Cristallographic Transformations Study by High Temperature X-Ray Diffraction: Application to Fast Firing in Fine Ceramic Field S. Miran and G. Bisson	856
The High Temperature Transformation of Petalite R.O. Heckroodt and V. Frith	860
Aluminium Oxycarbide Formation on Carbon-Coated Al₂O₃.MgO Spinel M.A. Sainz and A. Caballero	864
Solid State Reaction between Tantalum (Ta) and Tantalum Carbide (TaC) Powders during Hipping N. Alexandre, M. Desmaison-Brut, F. Valin and M. Boncoeur	868
Microstructural Development during the Sintering of Sepiolite T. Baykara, E. Günay, M. Kara and S.S. Tarar	872
Sintering of ZrO₂ - CeO₂ - Y₂O₃ Alloys: Influence of Powder Preparation G. Farne, F.G. Ricciardiello, L.K. Podda and D. Minichelli	876
Preparation and Fabrication of Lithium Titanate Ceramics S.B. Lagos, J.C. Jimenéz and L.A. Peña	880

Densification of Diatomite and Microporous Structure Formation via Heat Treatment R. Çeşmeci, Z. Misirh, A.A. Göktas and T. Baykara	884
Mullite Synthesis from Sol-Gel Method M.G. Caligaris, N.E. Quaranta and R.E. Caligaris	888
Densification and Grain Growth Kinetic for Silicon Nitride G. Bernard-Granger, R.L. Yeckley and R. L'Amoulen	892
Experimental and Computational Study for Grain Growth in AlN Based Ceramics M. Tajika, H. Matsubara and W. Rafaniello	896
Effect of Slip Conditions on the Microstructure of Supported α-Alumina Layers L.G. Grönroos and T.A. Mäntylä	900
Phase Transformation and Sintering of γ-Al₂O₃-Effects of Powder Characteristics and Dopants (Mg or Y) P. Bowen, C. Carry, H. Hofmann and C. Legros	904
Sintering of Magnesia Doped Sol-Gel Alumina L. Radonjić, L.M. Nikolić and Z. Obrenovic	908
Parameters Influencing the Preparation of Coarse Grained Al₂O₃ Ceramics A. Kosmos, D. Sušnik and D. Kolar	912
Oxidizing Sintering Behaviour of UO_{2+x}-Lanthanide Oxide Compounds C. Rocanière, P. Dehaut and B. Gaudreau	916
Preparation of Translucent SnO₂ Ceramics by Natural Sintering J.P. Bonnet, A. Smith and D. Gouvêa	920
BaTiO₃-Ceramics Structure and Consolidation Process V.V. Mitić, L.M. Kocić and I. Mitrović	924
Indium Oxide Ceramics with Titania Additions N. Nadaud and P. Boch	928
Sintering Study of Hyperstoichiometric Powder Compacts of UO_{2+x}-(6mol%)PuO₂ F. Huet, B. Gaudreau, P. Dehaut and S. Pillon	932
Sintering Conditions and Resulting Properties of Solid State Sintered Silicon Carbide A. Kerber and S.V. Velken	936
Phase Evolution during the Nitridation of Silicon with a Clay Additive S.P. Swenser and Y.B. Cheng	940
Synthesis and Characterization of Metal-Mg_{0.9}Al₂O₄ and ZrO₂-MgAl₂O₄ Composites K.B. Kim, C. Laurent, A. Peigney and A. Rousset	944
Microstructure Development of Ni-YSZ Composite Materials Prepared by Gel-Precipitation Method M. Marinšek and J. Maček	948
Effect of Y-PSZ Additive on the Structure, Thermal Behaviour and Mechanical Properties of β-Spodumene Ceramic M. Nocuń and W. Bugajski	952
Seeding for the Development of Unique Microstructures G.L. Messing, M.M. Seabaugh, S.H. Hong, B. Brahmaroutu and S. Troler-McKinstry	956
Study of a Multilayer-Based Technique with Sintering Additives for Microstructuring of Single-Phase Ceramics S. Ahne, W. Rossner and P. Greil	960
Development of Opacities Materials for Glazes Ceramics I. Nebot, J. Bakali, M.T. Tichell, A. Pascual, E. Cordoncillo and J.B. Carda	964
Elaboration and Characterization of Submicronic SiC-TiB₂ Composites by Reactive Pressureless Sintering C. Blanc, F. Thévenot and D. Treheux	968
Optimised Si₃N₄ Ceramics Containing Nitrogen Woehlerite as a Grain Boundary Phase V.A. Ijevskii, I. Wiedmann and F. Aldinger	972
Sintering and Microstructural Evolution of Si₃N₄-La₂O₃-Y₂O₃ System from Different Powder Processing Methods F. Monteverde and A. Bellosi	976
High Temperature Stability of α-SiAlONs Containing Mixed Cations A. Seeber and Y.B. Cheng	980
Optimization and Improvement of Sialon Ceramics with New Heat Treatment Techniques H. Mandal and D.P. Thompson	984

Thermal Stability of Rare Earth Densified α-Sialon Ceramics H. Mandal and D.P. Thompson	990
Densification of Mixed-Oxide Coated Silicon Nitride Powders Z. Tatli, D.P. Thompson and R.J. Errington	994
$\text{Si}_3\text{N}_4/\text{SiC(N)}$ Nanocomposites Influence of SiC(N) Nanoprecipitates on the Microstructure M. Mayne, D. Bahloul-Hourlier and P. Goursat	998
Microstructure of Al_2O_3-SiC Nanocomposites H.K. Schmid, M.H. Aslan, S. Assmann and R. Naß	1002
Al-AlN Composites Elaborated by Squeeze Casting M. Chedru, G. Boitier, J. Vicens, J. Chermant and B.L. Mordike	1006
Fabrication of Various Nanocomposites Starting from Hydrothermal Powder Mixtures C. Courtois, A. Rabihi, D. O'Sullivan, A. Leriche and B. Thierry	1010
Nano-Inclusions Associated with β-SiAlON Grains in α-β SiAlON Materials S.P. Swenser, E.V. Pereloma and Y.B. Cheng	1014
Materials on the Basis of Finely Dispersed Si_3N_4 Powders I. Zalite, M. Herrmann and J. Grabis	1018
Microwave-Sintering of Titania J. Bossert and C. Ludwig	1022
Physicomechanical and Thermophysical Properties of High-Melting Compounds - Based Ceramics Sintered at High Pressures V.S. Urbanovich and V.B. Shipilo	1027
Pressure-Assisted Sintering of High Purity Barium Titanate S. Van den Cruissem, P.G.T. Van der Varst and G. de With	1031
From the Powder to the Electro and/or Magnetic Ceramic Component: Fine Grain Size and Properties J.C. Niepce and P. Perriat	1035
Properties of Hydrothermally Prepared Ferroelectrics M. Höftberger, A. Pissenberger and G. Gritzner	1036
Analysis of Motion of the Domain and Phase Boundaries in the Process of Polarization and Polarization Reversal in Low-Coercive CTS-Based Ferroelectric Ceramics G.M. Akbaeva, A.V. Shilnikov, V.N. Nesterov and A.L. Burkhanov	1040
Electromechanical Interactions and Physical Properties of Perovskite-Type Ferroelectric Ceramics V.Y. Topolov and A.V. Turik	1044
Peculiarities of the Domain Structure of the Perovskite-Type Ceramic Ferroelectric Materials Z. Surowiak, E.G. Fesenko and J. Dudek	1048
Dielectric Anomaly of $(\text{Sr}_{1-x}\text{Bi}_{2x/3})\text{TiO}_3$ Ceramic in the Temperature Range of 300-550K Y. Zhi, A. Chen, P.M. Vilarinho, P.Q. Mantas and J.L. Baptista	1052
The Ferroelectric and Frequent Characteristics of BaTiO_3-Ceramics with Additives V.V. Mitić, M. Radmanović, L.M. Kocić and Z. Dukić	1056
The Fractals and BaTiO_3-Ceramics Structure V.V. Mitić, L.M. Kocić and M.M. Ristić	1060
New Experimental Evidence of Relaxor Ferroelectrics Y.M. Poplavko	1064
Modified $\text{PbSc}_{1/2}\text{Nb}_{1/2}\text{O}_3$ Ferroelectric Ceramics L. Chakare, M. Dambekalne, K. Bormanis, A. Sternberg and I. Brante	1068
High Electromechanical Coupling in Relaxor $\text{Pb}(\text{Sc}_{1/2}\text{Nb}_{1/2})\text{O}_3$ - PbTiO_3 System Hot-Pressed Piezoelectric Ceramics A. Kalvane, M. Antonova, M. Livinsh, M. Kundzinsh, A. Spule, L. Shebanovs and A. Sternberg	1072
The Role of PbO on the Sintering Behavior and Microstructural Development of $\text{Pb}(\text{Mg}_{1/3}\text{Nb}_{2/3})\text{O}_3$ based Relaxors M. Villegas, C. Moure, P. Durán, J.F. Fernández, Z. Samardžija and M. Kosec	1076
Dielectric Properties and Ordering Behavior of $\text{Pb}(\text{Fe}_{2/3}\text{W}_{1/3})\text{O}_3$ Ceramics with Na and La Substitutions L. Zhou, P.M. Vilarinho and J.L. Baptista	1080

Dielectric Dispersion and Slow Relaxation Process in Modified PbTiO₃ Ferroelectric Ceramics	
A.V. Turik, E.V. Stitsenko and O.V. Pugachev	1084
Piezoelectricity in PbTiO₃ - Based Ferroelectric Ceramics: a Review	
A.V. Turik and V.Y. Topolov	1088
The Connection Processing - Structure - Electrical Properties in Ceramics PbTiO₃	
V. Vasilescu, A. Dumitru, D. Dudu and M. Bucătaru	1092
Phase State and Structure of Ferroelectric Ceramics under Irradiation	
A. Sternberg, A. Spule, L. Shebanovs, E. Birks, H.W. Weber, H. Klima and F. Sauerzopf	1096
Observations of Cracking in Bulk PLZT Ceramics	
A. Levstik, C. Filipič and V. Bobnar	1100
Switching Kinetics in Thick Film and Bulk PLZT Ceramics	
A. Levstik, M. Kosec, V. Bobnar, C. Filipič and J. Holc	1104
Anelastic Behavior of Piezoelectric PZT Ceramics	
E.M. Bourim, B.L. Cheng, M. Gabbay and G. Fantozzi	1108
Effect of Poling and Poling Reversal on the Piezoelectric Properties of PZT Type Ceramics	
E. Dimitriu, C. Miclea, C. Tănăsioiu and L. Amarande	1112
The Influence of Excess Lead Oxide on the Piezoelectric Properties of NbLi Doped PZT Type Materials	
C. Miclea, C. Tănăsioiu and E. Dimitriu	1116
Pyroelectric Detectors from RF sputtered PZT Type Materials	
C. Constantin, L. Ribco, R. Ramer, M. Stegarescu, I. Matei and L. Trupina	1120
Preparation of PLZT Materials Using Powders from Aqueous Coprecipitation	
M. Pereira and P.Q. Mantas	1123
Microstructure of 90° Domains in Ferroelectric Materials studied by XRD	
C. Valot, N. Floquet and J.C. Niepce	1127
Phase Coexistence at MPB in PZT Thin Films prepared by Sol-Gel Processing	
F. Vasiliu, C. Parlog, C. Cobianu, A. Ianculescu and V. Ontalus	1131
SrBi₂Nb₂O₉ Ferroelectric Thin Films prepared by Sol-Gel Spin-Coating	
J.H. Yi, P. Thomas, M. Manier, J. Mercurio, I. Jauberteau and B. Frit	1135
Production of Dense Lead Zirconate Titanate (PZT) Films	
B. Matthes, G. Tomandl and A. Werner	1139
LiNbO₃ Thin Films prepared from a Polymeric Precursor Method	
V. Bouquet, E.R. Leite, E. Longo and J.A. Varela	1143
SAW Materials and Devices Characterization of High Resolution and Accuracy	
M. Weihnacht, K. Franke, K. Kunze and H. Schmidt	1147
Fabrication Processes of Magnetic and Dielectric Multilayer Ceramics	
S. Sarraute, O.T. Sorensen and E.R. Hansen	1151
Grain Boundary Structures in Electronic Ceramics	
J.D. Russell, C. Leach and R. Freer	1155
Valence States of MgO, Al₂O₃ and Metal-Oxide Interfaces	
P. Jonnard, C. Hombourger, F. Vergand and C. Bonnelle	1159
Ceramic Micropackages Realised through the Technology. Specific to Electronic Components	
C. Anton, V. Burghilea and I. Anton	1163
Effect of NiO on the Sintering Behaviour of BaTiO₃	
W.H. Tzing and W.H. Tuan	1167
Dielectric Properties of NiO-Doped BaTiO₃ sintered with different Oxygen Partial Pressure	
W.H. Tzing and W.H. Tuan	1171
Evolution of Hysteresis Loops with Temperature Studied on Dielectric Ceramics Based on Tetragonal Tungsten Bronze Structure	
S. Vallar, A. Cherifi and J.-. Haussonne	1175
Doping Elements Influence on Microstructural and Dielectric Properties of Alpha Alumina	
S. Beaudet, J.C. Bernier and D. Autissier	1179
Formation and Characteristics of some Cerium-Doped Ba(Ti,Sn)O₃ Solid Solutions	
E. Andronescu, A. Ianculescu, C. Parlog, F. Vasiliu and I. Pencea	1183
Dielectric Properties in Ce doped BaTiO₃ Solid Solutions	
J. Zhi, A. Chen, P.M. Vilarinho, Y. Zhi and J.L. Baptista	1187

MW Ceramic Dielectrics Based on the System BaO-(Nd,Sm)₂O₃-TiO₂ A.G. Belous and O.V. Ovchar	1191
Polarization Mechanism of Thermostable Microwave Ceramics Y.M. Poplavko	1195
Effect of the Grinding Process on Different Characteristics of (Zr,Sn)TiO₄ Microwave Dielectric Ceramics D. Houivet, J. El Fallah and J.-. Haussonne	1199
Dielectric Ceramics Derived from Barium-Tetratitanate Based Solid Solutions I. Teoreanu, A. Folea and A. Volceanov	1203
The Formation and Composition of Compounds in the Ba- Rich Region of the BaO-M₂O₃-TiO₂ Ternary System (M=Y and Nd) A. Chen, J. Zhi, Y. Zhi, P.M. Vilarinho and J.L. Baptista	1207
The Influence of Isovalent Doping on the Microwave Dielectric Properties of Ba_{6-x}Nd_{8+2/3x}Ti₁₈O₅₄ Based Ceramics M. Podlipnik, M. Valant and D. Suvorov	1211
Introduction of Oxyanions into Copper Oxides: A Route for the Generation of New High T_C Superconductors B. Raveau, M. Hervieu, C. Michel, C. Martin and D. Pelloquin	1215
Relationship between the Microstructure and the Properties of Undoped and Pb-Doped Hg-1223 Superconductors I. Sargánková, W. König, M. Mair and G. Gritzner	1219
Transport Current in Highly Textured Bulk (Bi,Pb)-2223 Ceramics V. Rouessac, G. Poullain, J. Provost, M. Gomina and G. Desgardin	1223
The Influence of Synthesis Environment on Magnetic Properties and Phase Content in BSCCO Superconducting Ceramic Obtained by Spray-Frozen, Freeze Drying Technique G.V. Aldica, P. Badica, S. Mandache and S. Popa	1227
The Influence of Synthesis Environment and Time on Volumetric Characteristics of BSCCO Superconducting Ceramic Obtained by Spray-Frozen, Freeze Drying Technique P. Badica, G.V. Aldica, V.V. Morozov, A.F. Alexeev and T.Y. Gridasova	1231
Glass and Glass-Ceramic Obtained in the Doped Bi-Sr-Ca-Cu-O System. Early Stage of Crystallization I. Teoreanu, V. Fruth, M. Zaharescu, G. Tanase and Z. Hegedüs	1235
Calculation of Oxalate Coprecipitation Conditions for the Synthesis of Superconducting Compounds L. Marta, O. Horowitz and M. Zaharescu	1239
Synthesis of Hg-Based Superconductors by Hot-Isostatic Pressing G.C. Celotti, A. Tampieri, C. Micheletti and D. Dalle Fabbriche	1243
New Technology to Improve Texturing and Transport Current in Bulk (2223) BSCCO Superconductors A. Tampieri, G.C. Celotti, G. Calestani and S. Lesca	1247
Superconductor BSCCO Thin Films Obtained by RF Sputtering C. Constantin, L. Ribco, R. Ramer, M. Stegarescu, I. Matei and L. Trupina	1251
Bi-Based Superconductors Obtained by Oxalate Coprecipitation, Containing Fe M. Popa, M. Zaharescu, L. Marta, L. Diamandescu and A. Țoțovână	1253
Synthesis and Raman Characterization of Hg_{1-x}Pb_xBa_{2-y}Sr_yCa₂Cu₃O_z Superconductors S.R. Lee, V. Petrykin, M. Kakihana and Y.D. Tretyakov	1257
Synthesis and Crystalline Structure of In₂Ba₄Cu₆O_x C. Piña Pérez and L. Chávez García	1261
Growth of NdBa₂Cu₃O_{7-δ} Single Crystals by a Horizontal-Bridgman Like Method S. Shibata, H. Unoki, K. Kuroda, N. Watanabe and N. Koshizuka	1265
Microscopic Studies of YBCO-Based Polycrystalline Materials K. Bormanis, M. Kalnberga, M. Livinsh, A. Patmalnieks and A. Sternberg	1269
Heteropolynuclear Complex Precursors Used in M(III)M(II)₂Cu₃O_{7-δ} Mixed Oxides Synthesis (M(III)=La, Ce, Y; M(II)=Sr, Ba) C. Guran, I. Jitaru, E. Andronescu, D.C. Berger, C. Matei and V. Fruth	1273
Investigation of YBa₂Cu₃O_{7-δ}/Y₂BaCuO₅ and EuBa₂Cu₃O_{7-δ}/Eu₂BaCuO₅ Composites M. Enisz and I. Kotsis	1277

Morphology and Composition of YBaCuO Targets after Laser Ablation for the Growth of Thin Films	
C. Andreouli, S. Christoulakis, A. Tsetsekou and T. Efthymiopoulos	1281
Raman Study of Compositionally Induced Phase Transitions in $\text{Nd}_{1+x}\text{Ba}_{2-x}\text{Cu}_3\text{O}_z$ Solid Solutions	
V. Petrykin, E.A. Goodilin, M. Kakihana and Y.D. Tretyakov	1285
Grain Resistivity and Grain Size in Non-Ohmic Oxide Ceramics	
A.I. Ivon, A. Glot, A.V. Gaponov and S.V. Mazurik	1289
A.c. Thermally Assisted Tunnel Transport in Zinc Oxide Non-Ohmic Ceramics	
A. Glot	1293
Percolation and Conduction of Disordered Ceramic Material with Integranular Barriers	
A.I. Ivon, A.K. Florov and A. Glot	1297
Densification, Microstructure and Voltage/Current Characteristics of Bi-Mn-Doped ZnO Ceramics Sintered at Low Temperature	
A. Peigney, F.X. Lamy de la Chapelle and A. Rousset	1301
The Effect of Variations in Sintering Temperature on the Structure of Electrically Active Interfaces in Zinc Oxide Varistors	
Z. Ling, J.D. Russell and C. Leach	1305
Investigation of Electronic Processes at the Grain Boundaries of a Multilayer Varistor	
V.A. Makarov, A.S. Tonkoshkur and I.V. Gomilko	1309
Thermodynamic and Experimental Investigation of the Effect of Rare-Earth Ions (Ln^{3+}) Nature on the Posistor Properties of $(\text{Ba}_{1-x}\text{Ln}_x^{3+})\text{TiO}_3$	
A.G. Belous, O.I. V'yunov, O.Z. Yanchevski and L.L. Kovalenko	1313
Electrode Influence on Transient Thermal Gradients in BaTiO_3 PTC Thermistors	
D.S. Smith, N. Ghayoub, E. Seal, A. Smith and A.H. Edwards	1317
Sintering Behavior and Electrical Properties of Pure and Doped Barium Titanate Powders Produced by Hydrothermal Synthesis	
P. Pinceloup, C. Courtois, A. Leriche and B. Thierry	1321
Investigation of the Microscopical Origin of the PTCR Anomaly in Two Phase Zn-Ni-O Ceramics	
D. Lisjak, M. Drofenik and D. Kolar	1325
Preparation of BaTiO_3 PTCR Ceramics by Low Temperature Liquid Phase Sintering	
I. Zajc and M. Drofenik	1329
Nickel Baryum Manganites: An Interesting System for NTC Thermistors	
S. Fritsch, C. Barthes, J. Sarrias and A. Rousset	1333
The Formation of Grain Boundary Potential Barriers in Semiconducting $(\text{Sr,Ca})(\text{Ti,Nb})\text{O}_3$ Ceramics	
F. Poignant and J. Juda	1337
Surface Characterisation of a Tin Oxide Nanosized Powder by FT-IR Spectrometry in Relation with the Semiconducting Properties	
J. Tribout, F. Chancel, M. Baraton, H. Ferkel and W. Riehemann	1341
Investigation of Electrical Behaviour of $\text{LaNi}_{0.6}\text{Co}_{0.4}\text{O}_3$ on Perovskite NTC-Ceramics	
O. Fruhwirth, A. Macher and K. Reichmann	1345
Comparison of Different Methods for Applying La-Ni-Co Oxide Films on PTCR Ceramics	
B. Trummer, O. Fruhwirth, K. Reichmann, F. Hofer, P. Warbichler and P. Poelt	1349
Thermogravimetric and Electrical Characterisation of a Tantalum Pentoxide Doped Ceria-Zirconia Solid Solution	
E. Lucchini, C. Schmid, I. Barbariol and S. Roitti	1353
Effect of the Low Temperature Synthesis on the $(\text{La}_{1-x}\text{Sr}_x)\text{MnO}_{3\pm\delta}$ System	
I. Maurin, P. Barboux, Y. Lassailly and J.P. Boilot	1357
Heteropolynuclear Complex Compounds as Precursors of LaCrO_3	
I. Jitaru, C. Guran, L. Stoica, D.C. Berger, E. Andronescu, V. Fruth, M. Danescu, A. Novac, M. Magureanu and T. Mosteanu	1361
Preparation of Anode Composite Materials for Solid Oxide Fuel Cells by Using Some Alternative Nickel Precursors	
M. Marinšek, A. Degen and J. Maček	1365
Structure and Properties of Acceptor Intercalated Graphite Fibres	
S. Błażewicz, B. Patalita, P. Touzain and D. Sarneo	1369

A Structural Study of Tin-Doped Indium Oxide (ITO) Ceramics Using ^{119}Sn Mössbauer Spectroscopy and Neutron Diffraction	
N. Nadaud, M. Nanot, J. Jové and T. Roisnel	1373
Chemistry and Microstructure of the Interface between Lanthanum Manganite and Cubic Stabilized Zirconia	
S. Faaland, T. Grande, R. Høier, K. Wiik and M.-. Einarsrud	1377
Performance of Mixed Conducting Electrochemical Filters for YSZ Oxygen Sensors	
A.D.S. Costa, J.A. Labrincha and F.M.B. Marques	1381
Properties of Composite ($\text{CaF}_2+\text{SiO}_2$) Solid Electrolytes	
M.M. Bučko and G. Róg	1385
The Preparation of CdTe Particles in Silica Glasses by a Sol-Gel Method	
E. Cordoncillo, J.B. Carda, F.J. Guaita and P. Escribano	1389
Application of NR to Study the Lithium Ion Transfer in Solid Ionic Conductors	
T. Esaka, M. Kamata, K. Takami, S. Takai, S. Fujine, K. Yoneda and K. Kanda	1393
Nonstoichiometry and Electrical Properties of the Perovskite $\text{Ca}_2\text{Fe}_{1.4}\text{Nb}_{0.6}\text{O}_\gamma$	
J.A. Chávez-Carvayar, T.C. Gibb and A.R. West	1397
Barium Hexaferrite as Permanent-Magnetic Material in Microsystems Technology	
D. Hülsenberg and R. Lipfert	1401
Synthesis of Single Crystals of Hard Ferrite in the Presence of Flux	
V. Burghilea and N. Stafie	1405
Preparation of Nd-Fe-B Magnetic Films by Ceramic Techniques	
B. Pawlowski, H. Beer and J. Töpfer	1409
Giant Magnetoresistance in $\text{La}_{1-x}\text{Ca}_x\text{MnO}_3$ Ceramics and Thin Films	
J.P. Araújo, P.B. Tavares, V.S. Amaral, A. Lourenço, J. Bessa Sousa and J.M. Vieira	1412
Deposition of Magnetoresistive $\text{La}_{1-x}\text{Ca}_x\text{MnO}_3$ Thin Films by Aerosol-Assisted MOCVD	
P.B. Tavares, V.S. Amaral, J.P. Araújo, A. Lourenço, J. Bessa Sousa and J.M. Vieira	1416
Magnetic Behaviour of Submicronic Acicular Composite Particles	
M.P. Buron, M. Gougeon and A. Rousset	1420
Microwave Behaviour in Z Type Polycrystalline Hexaferrites	
P. Allegri, D. Autissier and T. Taffary	1424
New Ceramics for the Information Storage: Nanoparticles of Titanium Ferrites. Influence of Oxidation and Reduction Reactions upon the Coercivity	
N. Millot, P. Perriat, S. Begin-Collin, M. Guyot, F. Bernard, D. Aymes, B. Cheng and B. Gillot	1428
Making Soft Past in the XVIII Century	
A. d'Albis	1432
Ion-Beam Archaeometry of Islamic Lustre Glazes	
R. Jarjis	1434
Forms and Fabrics of the Terracotta Industry in Southern Etruria in the Third and Second Centuries B.C.	
M. Söderlind and A. Lindahl	1438
Characterisation of Mosaic 'Glazes' from the 'S. Giusto' Basilica (Puglia, Italy)	
C. Fiori, M. Macchiarola, M. Vandini and G. Ercolani	1444
Ceramics of Cucuteni	
V. Burghilea, C. Moraru, A. Mercus, D. Mercus and G. Niculescu	1448
Medieval Ceramics From Piuia Petrii Archaeological Site	
V. Burghilea, L. Stoica, G. Niculescu and C. Popa	1452
Re-Evaluating Late Nineteenth Century Creative Innovations in the Silicate Industry: The Zsolnay Ceramics Works of Pécs, Hungary	
T. Mattyasovszky-Zsolnay and E. Vécsey	1456
Ceramic's Technics and Technology of Bernard Palissy	
I. Perrin and B. Velde	1460
Excavated Iznik Kilns and Characterization Studies of the Kiln Furniture	
E. Geçkinli, C. Peyk, V. Gürkan, A. Altun and O. Aslanapa	1464
Archaeological Ceramic Glazes Characterization by Laser Ablation - Inductively Coupled Plasma - Mass Spectrometry (LA-ICP-MS)	
M. Blet and B. Gratuze	1466

Apport de la Cathodoluminescence à l'Etude des Transformations de Phases Cristallines dans des Céramiques Kaolinitiques Carbonatées	
D. Piponnier, F. Bechtel, D. Florin, J. Molera, M. Schvoerer and M. Vendrell	1470
Etudes en Laboratoire des Céramiques de Type Vassiliki en Crète Orientale	
A. Schmitt and O. Pelon	1474
Byzantium and the Crusaders: Ceramic Considerations	
H. Hatcher and P. Armstrong	1475
Late La Tène Figurative Painted Pottery: Diffusion of a Product or a Concept?	
N. Huet, V. Guichard, P. Barral, J.-. Segulier and I. Pasquier	1476
Galloroman Terra Sigillata Imitations of Western Switzerland: Technology and Provenance	
A. Zanco	1480
The Scientific Investigation of Bricks from St. Urban (13th Century Cistercian Monastery, Lucerne, Switzerland)	
S. Wolf	1481
Cathodoluminescence Analysis: A Tool for Ceramic Differentiation?	
P. Picouet	1482
X-Ray Fluorescence Analysis of French Modern Faïences (XVI-XIX AD): First Results	
J. Rosen	1483
High-Lead Glazes Compositions and Alterations: Example of Byzantine Tiles	
A. Bouquillon and C. Pouthas	1487
Characterisation of the Renaissance Polychrome Italian Terracotta Sculptures of the Louvre Museum	
G. Querré and A. Dubus	1491
Characterization and Alterations of Hispano-Moresque Tiles of 14th Century	
J. Pérez-Arantegui, P. Lapuente, P. Punter and J.R. Castillo	1493
Ceramics of the Crusader Period found in Acre: An INAA and ICP Study of the Local Productions and of Some Imports from the Byzantine World	
S.Y. Waksman, E.J. Stern, I. Segal and J. Yellin	1496
Effect of Surface Residual Stresses on Surface Crack Behaviour and Wear of Y-TZP	
S. Conoci, C. Melandri and G. de Portu	1501
Oxidation Behaviors of PVD TiAlN Films	
D. Lii, J.L. Huang and B. Shew	1505
Properties of Electrospark Coatings on Titanium Alloy	
I. Podchernyaeva, A.I. Juga and V.I. Berezanskaya	1507
Coefficient of Friction between Yarns and Ceramic Parts for Textile Applications	
S. Raffy	1511
'The Effect of Microstructure Modifications on the Mechanical Behaviour of Alumina Based Ceramics for Wear Applications'	
M. Vardavoulis, C. Agrafiotis, A. Tsetsekou and C.J. Stournaras	1515
Composite Sol-Gel Ceramic Coatings	
J. Lawrence, Q. Yang and T. Troczynski	1519
The Wet Erosive Wear of Polycrystalline Alumina with Silicon Carbide Particulate Inclusions	
P.C. Twigg, G. Alexandre, R.W. Davidge, F.L. Riley and S.G. Roberts	1520
Factors Affecting the Wet Erosive Wear of Liquid Sintered Aluminas	
P.C. Twigg, R.W. Davidge, S.G. Roberts and F.L. Riley	1524
Sliding Wear Damage in Polycrystalline Alumina Microstructures	
L. Esposito, G. Nicoletto, A. Tucci and A. Salomoni	1528
Bioactive Coatings Based on Hydroxyapatite	
A. Ioncea, C. Novac, D. Radu, C. Florea, O. Dumitrescu and D. Ionescu	1532
Influence of Silicon Surface Preparation and Orientation on Diamond Nucleation and Growth in CH₄/H₂ System Discharge	
M. Belmahi, J. Bougdira, H. Chatei, N. Maloufi, M. Rémy and P. Alnot	1536
SIMS Study of Amorphous Carbon Films Deposited on Silicon and TA6V Substrates	
C. Tixier, M. Cahoreau and J. Desmaison	1540
PH Influence on the Properties of Mullite Coatings	
N.E. Quaranta, R.E. Caligaris, L.E. Briand and H.J. Thomas	1544

Improvement of Tribological Properties of Plasma Sprayed Ceramic Coatings Based on the Alumina Titania System	
V. Fervel, B. Hansz, B. Normand and C. Coddet	1548
Plasma Generation over Liquid Surfaces and its Application to Ceramic Synthesis - Diamond and Alumina -	
T. Suzuki, T. Ishihara, T. Shimosato, T. Yamazaki and S. Wada	1552
Influence of Substrate Preheating on the Adhesion and the Development of Residual Stresses in Plasma Sprayed Ceramic Coatings	
A.C. Leger, M. Vardelle and P. Fauchais	1556
In Situ Study of Chemical Reactions during Growth of TiN Layer from Gas Phase	
S. Jonas, W.S. Ptak, E. Walasek, I. Holyst and A. Czyżewska	1560
Selection of Materials for Use at Temperatures above 1500°C in Oxidizing Atmospheres	
K. Bundschuh, M. Schütze, C. Müller, P. Greil and W. Heider	1564
Corrosion of Ceramics in Halogen-Containing Atmospheres	
D.W. Readey	1568
High Temperature Corrosion of a Porous Si₂N₂O-ZrO₂ Composite Material	
M. Heim, C. O'Meara, J. Chen, R. Gatt and R. Pompe	1572
Oxidation Behaviour of Yttrium and Rare-Earth Doped α-Sialon Ceramics at 1350°C	
Z.J. Shen, P.O. Käll and M. Nygren	1576
The Oxidation Kinetics of a Yttria-Doped Hot-Pressed Silicon Nitride	
F.A.C. Oliveira, D.J. Baxter and J. Ungeheuer	1580
Novel Approaches to Determining Oxidation Phenomena in Non-Oxide Ceramics	
D. Hall, D.D. Gohil, S.R.J. Saunders and R. Morrell	1584
Corrosion of Si-Based Non-Oxide Ceramics by Molten Na₂SO₄	
C. Berthold and K.G. Nickel	1588
Bubble Formation in the System Si-O-N	
E. Butchereit and K.G. Nickel	1592
Degradation of Dense Silicon Nitride in a High Temperature Combustion Environment	
D.J. Baxter, T. Graziani, H.M. Wang and R.A. McCauley	1596
AlN-Based Ceramics - an Alternative to Si₃N₄ and SiC in High-Temperature Applications?	
Y.G. Gogotsi, J. Desmaison, R.A. Andrievski, D.J. Baxter, M. Desmaison-Brut, R.J. Fordham, G.V. Kalinnikov, V. Lavrenko, A.D. Panasyuk, F. Porz, G. Richter and S. Schneider	1600
Elaboration and Characterisation of Alumina Platelet Reinforced Molybdenum Disilicide	
V. Costil, Y. Jorand, C. Duret and G. Fantozzi	1604
Oxidation of New Ceramics Based on Ti₃SiC₂	
E.M. Fryt, J. Lis and L. Stobierski	1608
High Oxidation Resistance of Hot Pressed Silicon Nitride Containing Yttria and Lanthania	
F. Monteverde and A. Bellosi	1609
The Effect of Intergranular Phase Crystallinity on the Oxidation Rates of a Silicon Nitride	
M.H. Carruth, D.J. Baxter and K.S. Coley	1613
A Comparison of the Oxidation Behaviour of As-Sintered and Machined Si₃N₄	
R.M. Persoons, P. Diels and M. Mertens	1617
High-Temperature Oxidation of AlN-SiC Ceramics	
A.D. Panasyuk, V. Lavrenko and S.F. Korablev	1621
High-Temperature Oxidation of AlN-ZrB₂ Ceramics	
V. Lavrenko, A.D. Panasyuk and V.P. Smirnov	1625
Mullite Based Oxidation Protection for SiC-C/C Composites in Air at Temperatures up to 1900 K	
H. Fritze, J. Jojic, T. Witke, C. Rüschler, S. Weber, S. Scherrer, B. Schultrich and G. Borchardt	1629
High Temperature Corrosion between SiC and FeCrAl Alloy for Gas Burner Application	
G. Galliot, C. Olagnon, G. Fantozzi and I. Alliat	1633
Environmental Resistance of Ceramic Matrix Composite Materials for Gas Turbine Applications	
G.P. De Gaudenzi, C. Taut, K. Iffländer and S. Corcoruto	1637
Oxidation Protection Coatings for C/SiC Based on Y₂SiO₅	
J.D. Webster, M.E. Westwood, F.H. Hayes, R.J. Day, R. Taylor, A. Duran, M. Aparicio, K. Rebstock and W.D. Vogel	1641

Fuel Composition Effects on Burner Rig Corrosion of a Silicon Carbide Exposed at 1000°C and 1300°C	
M.H. Carruth, D.J. Baxter and K.S. Coley	1645
Testing of Si₂ON₂-Ceramics Made from Microsilica and Si₃N₄ Powder	
M. Bruno and J.L. Holm	1649
Corrosion of MgO and MgAl₂O₄ by Aluminium Alloys	
V. Gabis, J.P. Ildefonse, B. Depussay, M. Richard and M. Stucky	1653
Reactivity between Two Liquid Nickel-Base Superalloys with SiO₂ Ceramics	
X.Y. Virieux, J. Desmaison, J.C. Labbe and A. Gabriel	1657
Moisture Expansion Phenomenon as a Specific Form of Brick Product Corrosion	
R.M. Vasić	1661
Surface Roofing Tile Scaling due to the Moisture Expansion Phenomenon	
R.M. Vasić	1665
Slagging Effects of Carbon Fly Ashes on Magnesite-Chrom Refractories	
E.A. Croquevielle	1669
Corrosion Effects of Glass on YSZ Electrolytes	
C.M.S. Rodrigues, J.A. Labrincha and F.M.B. Marques	1673
Corrosion of Zirconia Ceramics in Acidic Solutions at High Pressures and Temperatures	
M. Schacht, N. Boukis, E. Dinjus, K. Ebert, R. Janßen, F. Meschke and N. Claussen	1677
Preparation of Multi-Layer Washcoats for Automobile Catalyst via Chemical Methods	
C. Agrafiotis, A. Tsetsekou, A. Ekonomakou and C.J. Stournaras	1683
Importance of Electrostatic Interactions for the Selectivity of Micro and Mesoporous Ceramic Membranes	
A.B. Larbot, S. Alami-Younssi, P. Blanc, E. Lino, M. Persin and J. Sarrazin	1687
Shaping of a RBAO-Membrane Support	
J. Luyten, J.F.C. Cooymans and R. Leysen	1691
Fabrication and Microstructure of the Ru Doped TiO₂ Composite Membranes with Fine pores	
D.S. Bae, K.S. Han and S.H. Choi	1695
Tape Casting of Diatomite for Filtration Applications	
P.V. Vasconcelos, J.A. Labrincha and J.M.F. Ferreira	1699
Porous Reaction Bounded Alumina: Machining and Joining Properties	
K. Vercammen, E. Van Hoof and J. Luyten	1703
Characterization of Multilayer Ceramic Membranes with the Atomic Force Microscope	
H. Guldberg-Pedersen, J. Tranto and J. Weiland Høj	1707
Steric Stabilization of Mixed Sol-Powder Suspensions	
T. Moritz, G. Werner, G. Tomandl and S. Starke	1711
Developing of Ceramic Membranes for Nanofiltration	
H. Richter, A. Piorra and G. Tomandl	1715
MgAl₂O₄ Spinel as Material for Ultrafiltration Membranes	
A.B. Larbot, G. Philip, M. Persin and L. Cot	1719
Centrifugal Forming of Pore-Gradient Membranes	
C.W. Hong, F.A. Müller and P. Greil	1723
An Investigation of Microstructure and Porosity of Silicon Carbide Materials	
P. Toro, P.C. Rojas and G.J. Piderit	1727
Development of Open-Pore Silicon Carbide Foams	
P.C. Rojas, G.J. Piderit and P. Toro	1731
Preparation and Characterization of Microporous TiO₂-Membranes	
I. Voigt, P. Puhlfürß and J. Töpfer	1735
Influence of Viscoelastic Characteristics of the Colloidal Suspension on the Formation of SnO₂ Supported Membranes	
L.R.B. Santos, A.B. Larbot, C.V. Santilli and S.H. Pulcinelli	1738
Surface Energy Components and Contact Angle of Pure and Yttria-Doped Zirconia Membranes	
F. Shojai, A.B.A. Pettersson, T.A. Mäntylä and J.B. Rosenholm	1742
Effect of Diffusion Processes Occuring during Active Brazing of Alumina Ceramics-FeNi42 Alloy Joints upon the Properties of the Joints	
W. Olesińska and W.K. Włosiński	1746

The Joining of SiC₃N₄ Using Al and Ni Interlayers: Microstructure and Mechanics M.I. Osendi, P. Miranzo, D. Treheux, D. Juvé and J. Jacquemin	1750
Preparation of Structured Ceramics for Membranes K. Weber, G. Tomandl, T. Wenger and K. Heckmann	1754
Microstructural Evolution of SiC/Metal Interfaces at Elevated Temperatures R. Metselaar, A.A. Kodentsov and F.J.J. van Loo	1758
Al₂O₃-Supported Zeolite Membranes M. Raileanu, M. Zaharescu, G. Tanase, N. Dragan and L. Simionescu	1762
TiO₂ Membrane Obtained by Sol-Gel Method Deposited on Al₂O₃ Supports M. Crişan, M. Zaharescu, L. Simionescu, D. Crişan and A. Toth	1766
Alternative Way of Producing Porous Silicon Nitride Ceramics for Membrane Application R.A. Terpstra, J.P.G.M. van Eijk and J.C.T. van der Heijde	1770
Mechanical Properties of Model Magnesia-Spinel Composite Materials C. Aksel, R.W. Davidge, P.D. Warren and F.L. Riley	1774
Thermal Shock of Ceramic Material: Comparison of Resistance Parameter with the Critical ΔT Values $\Delta T_c = \Delta T_c(Bi)$ of Ceramic Materials T. Volkov-Husović, R.M. Jančić and Z.V. Popović	1778
Phase Transformations in the Ternary Systems HfO₂(ZrO₂)-y₂O₃-Eu₂O₃ E.R. Andrievskaya and L.M. Lopato	1782
Development of High Alumina Sintered Block as an Alternate to Fusion Cast Blocks for Solid Hearth of Pusher Type Reheating-Furnace P. Nandi, R.K. Singh, A. Garg, P. Barua and L. Tiwari	1786
Thermomechanical Behavior of Refractory Castables under Compressive Stresses P. Dedenis, H. Le Doussal and P. Meunier	1790
Sialon Bonded Alumina Refractories for Iron and Steel Industry J. Bitouzet, F. Goulven and J. Schoennahl	1794
Mullitization of Andalusite in Refractory Bricks J.P. Ildefonse, V. Gabis and F. Cesbron	1798
Influence of Ceramic Bond on the Physico-Mechanical Properties of Carborundum Refractories N.C. Ciocea, V. Bertalan, F. Mihalache and C.R. Barbaresso	1802
Mullite Refractory Castables with Low and Ultra-Low Cement Content N.C. Ciocea, V. Bertalan, F. Mihalache and C.R. Barbaresso	1806
Microstructure Created for Highering the Thermal Shock Resistance M. Hagiopol	1810
Preparation and Properties of Spinel Rich of Magnesium and Aluminium L. Vollweiler, H. Jost and H. Hausner	1814
Volume Stability of Spinel-Bonded Magnesia Castables M. Rigaud, C. Xing and V. Kovač	1818
Strength-Composition-Microstructure Relationships in Silicon Nitride Bonded Silicon Carbide Refractory Materials J. Mapiravana, B. Rand and F.L. Riley	1821
Alumina Refractory Masses Hardened at Normal Temperatures by Coagulation I. Teoreanu and M. Muntean	1825
Ceramic Materials in the System ZrO₂-TiO₂-Al₂O₃ for Applications in the Ferrous and Non Ferrous Metallurgy C.G. Aneziris, E.M. Pfaff and H.R. Maier	1829
Phase Transitions during the Dehydration Reaction of Hydrous Zirconia E. Volceanov, A. Pantea, M. Georgescu, A. Volceanov and B. Matović	1834
Fusion Cast Refractories NAZS: Influence of the Na₂O Content on Both the Phasal Composition and the Microstructure M. Gervais, M. Gaubil, D. Massiot and J.P. Coutures	1838
High Temperature Elasticity of MgO/C Refractories F. Debucquoy, H. Baudson, M. Huger, C. Gault and M. Rigaud	1842
Optimisation of Raw Material Mixture Composition and Processing Variables of Blended Portland Cement L. Retrašinović-Stojkanović, S. Milošević, B. Živanović and M. Đurić	1846

Selection of Industrial Refractories for Core Catcher Application M. Fritz, M. Boussuge and Y. Bienvenu	1850
Physico-Chemical Study of Reactions between a Magnesite-Graphite Refractory and Liquid Steel M. Boher, J. Lehmann, H. Soulard, M. Kandel, M.C. Kaerlé and C. Gatellier	1854
Heat Treatments of Calcium Aluminate Cements: Changes in Structure and Mechanical Properties N. Richard, N. Lequeux and P. Boch	1858
Formulation of Zircon Refractory Using Silicic Residue from a Geothermal Power Plant as Intergranular Cement C. Diaz	1862
Porous Interfaces as Crack Deflecting Interlayers in Ceramic Laminates W.J. Clegg, K.S. Blanks, J.B. Davis and F. Lanckmans	1866
C-Fibre Reinforced Composites with Polymer-Derived Matrix: Microstructure, Thermal Properties, Strength G. Ziegler, J. Lücke, I. Richter and D. Suttor	1870
Probabilistic-Statistical Approach to the Mechanical Behavior and Failure of Ceramic Matrix Composites (CMCs) J. Lamon	1874
Development of Non-Oxide Ceramic Matrix Composites Based on Reactive Infiltration and In Situ Growth of AlN Bonding Phase V.M. Kevorkian	1878
Non-Oxide CMC Formation by Reactive Melt Infiltration J. Rosenlöcher, M. Feldmann and P. Greil	1882
The Deflection of Cracks at Interfaces W. Lee and W.J. Clegg	1886
SiC (Nicalon NLM 202)/SiC Microcomposites with a Highly Crystallized BN Interphase F. Rebillat, A. Guette, L. Espitalier and R.R. Naslain	1890
Interfacial Properties of Multilayered Interphases in SiC/SiC CVI-Composites with Weak and Strengthened Interfaces F. Rebillat, J. Lamon and R.R. Naslain	1894
Nicalon SiC Fibre Reinforced Pre-Prepared β-Sialon Composites A. Demir and D.P. Thompson	1898
Conductive SiC-Fibre Reinforced Composites as a Model of Smart Components B. Fankhänel, E. Müller, T. Fankhänel and W. Siegel	1902
Mechanical Stiffening of Ceramic Matrix Composites Induced by Cyclic Fatigue P. Reynaud, A. Dalmaz, D. Rouby and G. Fantozzi	1906
Assessment of the Static Fatigue Behaviour of the SiC Fibre-Reinforced Lithium Magnesium Aluminosilicate Glass-Ceramic Matrix Composite Tested under Uniaxial Tensile Loading M. Drissi-Habti and D. Rouby	1910
Microstructure and Creep of C_f-SiC Composites G. Boitier, J. Vicens and J. Chermant	1914
2D SiC_f-MLAS Tensile Creep Tests H. Maupas and J. Chermant	1918
Estimation of the Bundle Bridging Stress in 2D SiC-SiC Composite Materials M. Drissi-Habti, J. Chermant and D. Rouby	1922
In-Situ Mechanical Characterisation and Interfacial Behaviour in Hi-Nicalon/BN/α-Si₃N₄ Ceramic Matrix Composites M. Drissi-Habti and K. Nakano	1926
Applications of Continuous Fibre Reinforced Ceramic Composites in Military Turbojet Engines P. Spriet and G. Habarou	1930
Mechanical Behavior of Fibrous Ceramic Matrix Composites under Constant Tensile Load. Influence of Fibre-Matrix Interface Properties B. Roy, M.L. Bouchetou, M. Huger, D. Fargeot and C. Gault	1934
Enhancement of the Oxidation Resistance of Carbon Fibres in C/C Composites via Surface Treatments S. Labruquere, R. Pailler, R.R. Naslain and B. Desbat	1938

Stress, Strain and Elastic Modulus Behaviour of SiC-Fiber/SiC Composites during Creep and Cyclic Fatigue Tests	
M. Mizuno, S. Zhu, Y. Kagawa and H. Kaya	1942
Mullite Long Fibres Prepared by Sol-Gel Method Using Water Solvent Systems	
K. Okada, S. Yasohama, S. Hayashi and A. Yasumori	1946
SiC-Based Ceramic Fibres: Thermal Stability and Oxidation Behaviour	
O. Greck, J.P. Viricelle, D. Bahloul-Hourlier, P. Goursat, M. Dalbin, S. Thomin and A.M. Flank	1950
Mass Spectrometric Study of Retarded Vaporization of Silicon Based Fibres: Origin of their Thermal Stability	
C. Chatillon, P. Rocabois and C. Bernard	1954
Crystallization of Polymer Derived Silicon Carbide Fibers	
H.-. Martin, D. Kurtenbach, E. Müller and G. Roewer	1958
The Properties of Fibrous Preforms	
M.I. Crankshaw and W.J. Clegg	1962
Application Potential of Fiber Reinforced Ceramics	
W. Schäfer, B. Plege and W.D. Vogel	1966
Nanocomposites Si₃N₄/SiCN: Influence of SiC Nanoprecipitates on the Creep Behaviour	
J.L. Besson, M. Mayne, D. Bahloul-Hourlier and P. Goursat	1970
Low Temperature Sintering and High Reliability PZT-Based Nanocomposite	
H.J. Hwang, M. Toriyama, M. Sando and K. Niihara	1974
Long-Term Behaviour of SiC/Si₃N₄-Nanocomposites at 1400-1500° C	
M. Herrmann, H. Klemm, C. Schubert and W. Hermel	1977
Near Net Shape Manufacturing of Polymer Derived Ceramics	
P. Greil	1981
Novel Polymer Derived Ceramic Hard Materials	
A. Kaindl, W. Lehner, P. Greil and D.J. Kim	1985
Colloidal Processing and Sintering Behaviour of Silicon Nitride Composites with Nanosized Alumina	
F.J. Oliveira, R.F. Silva, J.M.F. Ferreira and J.M. Vieira	1989
Structural Development and Properties of Si₃N₄-SiC Composites from Amorphous Si-C-N Powder Precursors	
E. Tschernikova, A. Neumann and G. Boden	1993
Properties of Cordierite-Silicon Carbide Nanocomposites	
D. O'Sullivan, C. Courtois, A. Leriche and B. Thierry	1997
Fabrication and Characteristics of Alumina-Silicon Carbide Nanocomposites	
D. Sciti, D. Dalle Fabbrie and A. Bellosi	2001
Microstructure Evaluation of Polymer-Derived Si-C-N-Ceramics Characterised by Scanning- and Transmission Electron Microscopy	
H.J. Müller, H.J. Kleebe, D. Suttor and G. Ziegler	2005
Microstructure and Mechanical Properties of Oxide Based Nanocomposites Fabricated by Spark Plasma Sintering	
Y.H. Choa, H. Kawaoka, T. Sekino and K. Niihara	2009
Electrophoretic Forming of Laminated Ceramic Composite Tubes	
L. Vandepierre and O. Van der Biest	2013
Laminar Si₃N₄-TiN Hot-Pressed Ceramic Composites	
V. Yaroshenko, N. Orlovskaya, M.-. Einarsrud, K. Berroth and V. Kovylayev	2017
Oxide Laminates with Tough Interfaces	
E.A. Nutbrown and W.J. Clegg	2021
β-Rhenanite (β-NaCaPO₄) as Weak Interface for Hydroxyapatite Ceramics	
W. Suchanek, M. Yashima, M. Kakihana and M. Yoshimura	2025
Preparation and Cytocompatibility of TCP-TiO₂ Biocomposites	
F. Caroff, K.S. Oh, R. Famery and P. Boch	2029
Preparation of TiO₂ Bioceramics with a TCP Rich Surface	
K.S. Oh, F. Caroff, R. Famery and P. Boch	2033
Space Group Determination of Hydroxyapatite and Carbonate Apatite	
Y. Suetsugu, Y. Takahashi, S.B. Cho, F.P. Okamura and M. Tanaka	2037
Composite Materials on the Base of ALN-AL₂O₃ with a Metallic Binder	
A.D. Panasyuk, I.P. Neshpor and V.A. Iavrenko	2040

Development of Tin-AlN Ceramics and Investigations of their Physicomechanical Properties O.N. Grigorlev, T.V. Mosina, A.D. Panasyuk and N.P. Brodnikovsky	2044
Manufacture and Properties of Al₂O₃-TiN Particulate Composites Z.S. Rak and J. Czechowski	2048
TiN Coating of Alumina Platelets and Mullite Fibres Using a Precipitated TiCl₄.4NH₃ Precursor for Incorporation into Ceramic Metal Composites P. Bowen, R. Mulone, T.A. Ring and S. Ampuero	2052
The Fabrication of Sintered Reaction-Bonded Silicon Nitride with β-Si₃N₄ Seed Crystal S.Y. Lee, D.S. Park, H.D. Kim, K. Amoako Appiagyei and B.S. Jun	2056
Fracture Behaviors of Al₂O₃SiC Composites Containing Various Sizes and Fraction of Fine SiC Particles D. Zhang, L. Li, R. Yu, H. Kan, W.J. Weng and M.Z. Ge	2060
ZrO₂-Ti_x Composites J. Vleugels and O. Van der Biest	2064
Dissolution of Si₃N₄-Al₂O₃(pl) Composite Tool Materials in Carbon Steels F.J. Oliveira, R.F. Silva and J.M. Vieira	2068
Zirconia Matrix Composites with Chromium Carbide and Chromium Oxide Inclusions J. Babiarz, K. Haberkowicz, Z. Pędzich and J. Piekarczyk	2072
Toughening Mechanisms in the TZP - WC Particulate Composites Z. Pędzich and K. Haberkowicz	2076
MoSi₂/Al₂O₃ Composites Processed by S.H.S.: Preparation Conditions and Microstructure J.P. Bonnet, A. Dumont, D.S. Smith and C. Gault	2080
Elaboration and Mechanical Characterisation of a Metal Matrix Composite: NiAl-SiCp and NiAl-ZrO₂p L. Plazanet and F. Nardou	2084
Influence of ZTA Content on the Compressive Deformation in the Al₂O₃-ZrO₂(12mol% CeO₂) System J.M. Calderon Moreno	2088
Modification of Microstructure of Porous Ceramics Using CVD Method E. Walasek, S. Jonas, G. Krupa, A. Bigaj and S. Kluska	2092
Development of Ceramic Components for Gas Turbine Application G.H.M. Gubbels, J.C.T. van der Heijde, H.W. Brinkman, J.L. Linden and R.A. Terpstra	2096
Determining Appropriate Slip Resistance Characteristics R. Bowman and S. Bohlken	2100
Standardization: The Case of Implantable Ceramics P. Vincenzini	2104
Critical Review of PEI Method-Wet Abrasion Test S. Despotovic, R.M. Vasić and S. Eric-Antonic	2108
CEN/VAMAS Study of Phase Volume Fraction Measurement - A Preliminary Review of Results E.G. Bennett, L.J.M.G. Dortmans, M. Hendrix, R. Morrell and G. de With	2111
The New ASTM Fracture Toughness of Advanced Ceramics Standard G. Quinn, M. Jenkins, I. Bar-On and J. Salem	2115
Influence on Tiles Final Quality of Oxygen Partial Pressure on the Firing Process F. Fabregat, G. Garcia Belmonte, J.B. Carda, V. Carceller, A. Soler and A. Nebot	2119
Optimisation of Industrial Ceramic Dryers J.A.M. Denissen and H.F.M. Velthuis	2123
Integration of Different Clay Parts into A Multi-Component Pottery Product K. Miyazaki	2127
Concentrates of Egyptian Nepheline Syenite Ring Complexes as a Source of Flux in Ceramic Recipes D.M. Ibrahim, M.H. Aly and R.M. Mannet	2131
Glass Ceramics from Modified Șanovița (Timiș) Basalt G. Kovacs, I. Lazău, I. Menessy and K. Kovacs	2135
The Thermal Expansion, Shrinkage and Formation of Crystalline Phases in Early Dense Fired Hydromica Containing Ceramic Body H. Mörtel, V. Schwinka, A. Cimmers, L. Lindina and R. Schwinka	2139

Bulk Crystallized Glazes in Quaternary System Na₂O-CaO-MgO-SiO₂ M. Preda and H.H. Rehner	2143
Ceramic Pigments Obtained with Chromium as Unique Chromophore A. Meghea and M. Preda	2147
Spectral Analysis of Ceramic Glazes from Industrial Minerals F. Genel, M.G. Paraspore, S. Paoloni, C. Sibilia, G. Polizzotti and G. Rizzo	2151
The Effect of Phlogopite Mica on the Sintering Point and Colour of a Claybody H. Airi, H. Olli, K. Kirsi and S. Tuuli	2156
Magnesium Hydrosilicate Kerolite - Potential Raw Material for Obtaining Cordierite Ceramics B. Matović, S. Radovanovic and E. Volceanov	2160
Particle Size Distribution - Mechanical Properties Relationship of Brick Clays A. Botis, V. Karayannis, A.D. Papargyris, G. Papapolymerou, X. Spiliotis and D. Kasidakis	2164
Thermal Analysis and Mechanical Properties of Brick Clays X. Spiliotis, G. Papapolymerou, V. Karayannis, A.D. Papargyris, A. Botis and D. Kasidakis	2168
Borate Raw Materials for the Ceramic Frit Industry W. Vickery and P. Nancarrow	2172
Moisture Expansion in Ceramic Building Materials J.V. Almeida, V.M. Ferreira and A.M.S. Correia	2176
Glass and Glass-Ceramic Binders for Abrasive Grains of Fused and Sintered Alumina Type SG into Abrasive Tools D. Hermann	2180
The Characterization of Raw Materials M. Vouillemet	2184
Influences of a CaCo₃ Sintering Additive on the Physical and Mechanical Properties of Clay-Based Ceramics H. Zanzoun, M. Gomina and R. Moussa	2188
Development of a 3D X Ray Cone Beam Tomograph for the Inspection of Ceramic Turbine Wheels T. Lhermitte, P. Rizo, M. Antonakios, J.M. Casagrande and L. Garguet-Duport	2192
What, How, and Why Soft and Solution Processing for Advanced Inorganic Materials M. Yoshimura	2196
An Overview of Ceramics Recycling in France C. Sultan	2200
Retention Capacity of the Calcium Silicates Hydrates (CSH) for Caesium P. Faucon, C. Richet, C. Lefebvre, F. Adenot, J.F. Jacquinet and J.C. Petit	2204
Use of Spray-Dried Natural Clay in Water Filtration M.J.P. Ribeiro and J.A. Labrincha	2208
Structure and Crystallization Study of Iron Phosphate Glasses A. Moguš-Milanković, D.E. Day and K. Furić	2212
Chemical Corrosion Phenomena of Clay Roofing Tiles J. Ranogajec, K. Kasaš, R. Marinković-Nedučin and S. Radosavljević	2216
Vitrified Glass-Ceramic Product Development from Industrial Wastes C.H. Drummond, R.D. Blume, P. Nevatia and Z. Gao	2220
Water Cleaning Effect of Silica-Alumina Sintered Spheres S. Yamada, M. Doyama, R. Chujo and R. Sakai	2224
Glass-Ceramics with Multibarrier Structure Obtained from Industrial Waste L. Berzina-Cimdina, R. Cimdins, I. Rozenstrauha, J. Bossert and I. Kravtchenko	2228
Study of Caesium Adsorption on Hydrated Calcium-Silicate-Aluminate Systems S. Bagoši and L.J. Csetenyi	2232
Environmental Optimization of Green Victoria Ceramic Pigment by Sol-Gel Methods M. Llusar, J.B. Vicent, M.A. Tena, J. Badenes, P. Escribano and G. Monrós	2236
Morphology of Altered Layers of Glasses O. Deruelle, O. Spalla, P. Barboux, J. Lambard and E. Vernaz	2240
Simulation of Fluoride Emission in Traditional Ceramic Firing Processes M. Bolech, R.A. Bauer and A.P.S. Reymer	2244
Fluoride Emission from Clay Materials J.A.M. Denissen, J.W. de Jong and A.H. de Vries	2248

Recycled Ceramic Waste for the Electro-Insulators Jointing Mixture and for Other Building Materials	
S. Miletić, M. Ilić and R.M. Vasić	2252
Siliconcarbonitride - Materials from Modified Recycling Products	
G. Boden	2256
Fabrication of the Hardened Bodies from Flyash	
A. Kishigami, T. Shirakami and K. Urabe	2260
The Foaming of Waste Glass	
V. Ducman and M. Kovačević	2264
Recycling of Windshield Glasses in Fired Bricks Industry	
H. Mörtel and F. Fuchs	2268
Bricks by Recycling - Product Design Based on Waste	
D. Sevelius	2272
Self-Propagating Reactions for Treating and Recycling Zinc Hydrometallurgical Wastes	
B. Simoncini, R. Orrù and G. Cao	2276
Ceramic Building Materials: An Alternative in Disposal of Sewage Sludge	
M.I.A. Almeida, M.R. Amaral, A.M.R.C. Sousa and M. Fonseca Almeida	2280
Sinterization of Doping Mullite with Rare Earths Using a Silica Rich Residue from a Geothermal Power Plant	
D. Valenzuela, C. Díaz and M. Avalos-Borja	2284