

Contents of Volume 14

Number 1

- 1 HREM and AEM Studies of Yb₂O₃-Fluxed Silicon Nitride Ceramics with and without CaO Addition
H.-J. KLEEBE, J. BRULEY & M. RÜHLE (Germany)
- 13 Preparation and Grain Boundary Devitrification of Samarium α -Sialon Ceramics
Y.-B. CHENG (Australia) & D. P. THOMPSON (UK)
- 23 Low-Shrinkage Refractories by an Infiltration Technique
N. LEQUEUX, P. LAROSE, P. BOCH & N. BURKARTH (France)
- 29 Fabrication of Yttria/Niobium Laminar Composites by Plasma Spraying
M. BONCOEUR & G. SCHNEDECKER (France)
- 37 The Interactions between Silver and Zirconia Inclusions and their Effects on the Toughening Behaviour of Al₂O₃/(Ag + ZrO₂) Composites
W. H. TUAN & W. R. CHEN (China)
- 45 Effect of SrO on Densification and Mechanical Properties of Reaction-Sintered Mullite–Zirconia
S. KINIKOĞLU & M. MARSOĞLU (Turkey)
- 53 System Si–Al–Mg–O: Thermodynamic Aspects of its Influence on the Oxidation Resistance of Silicon Carbide at High Temperature
A. DERRE, M. DUCARROIR & M. ALLIBERT (France)
- 61 Characterization of MgSiO₃, CaMgSi₂O₆ and CaSiO₃ Precursor Powders by ²⁹Si MAS NMR
S. HAYASHI, K. OKADA & N. OTSUKA (Japan)
- 67 X-Ray Absorption Spectroscopy Study of the Local Structure and the Chemical State of Yttrium in Polycrystalline α -Alumina
M. K. LOUDJANI & R. CORTÈS (France)
- 77 Phase Transformations and Control of Habit in Lyothermal Synthesis of α -Al₂O₃
A. KAISER, D. SPORN & H. BERTAGNOLLI (Germany)
- 85 Low-Temperature Aqueous Preparation of Barium Metatitanate Powders
P. NANNI, M. LEONI, V. BUSCAGLIA & G. ALIPRANDI (Italy)
- 91 Damage Investigations in Unidirectional SiC-MAS.L Composite Materials under Quasi-Static Tensile Loading
M. DRISSI-HABTI, T. DESPIERRES, J. FOUBERT & M. GOMINA (France)

Number 2

- 97 Reaction Bonding of Aluminum Oxide (RBAO) Composites: Processing, Reaction Mechanisms and Properties
N. CLAUSSEN, S. WU & D. HOLZ (Germany)
- 111 In-situ Scanning Acoustic Microscopy of Crack Bridging in Alumina
T. J. MARROW, G. A. D. BRIGGS & S. G. ROBERTS (UK)

- 117 Preparation of an Alumina Aerogel with SiC Whisker Inclusion
Y. MIZUSHIMA & M. HORI (Japan)
- 123 Synthesis of Yttrium Aluminum Garnet Precursor Powders by Homogeneous Precipitation
D. J. SORDELET, M. AKINC, M. L. PANCHULA, Y. HAN (USA) & M. H. HAN (Korea)
- 131 Influence of Formation pH and Grinding of Precursors on Compaction and Sintering Behaviours of 3 mol% Y_2O_3 - ZrO_2
A. SAMDI, B. DURAND (France), A. DAOUDI (Morocco), F. CHASSAGNEUX, J. P. DELOUME, M. TAHA, J. PALETTO & G. FANTOZZI (France)
- 143 Prediction of Overall Shape of Sintered Alumina Compacts
N. ÖZKAN & B. J. BRISCOE (UK)
- 153 R-Curve Behaviour in Ceramic Composites Produced by Directed Metal Oxidation
J. RÖDEL, M. SINDEL, M. DRANSMANN, R. W. STEINBRECH & N. CLAUSSEN (Germany)
- 163 Liquid Phase Sintering, Electrical Conductivity, and Chemical Stability of Lanthanum Chromite Doped with Calcium and Nickel
G. M. CHRISTIE, P. H. MIDDLETON & B. C. H. STEELE (UK)
- 177 Oxidation Effects on the Mechanical Properties of 2D Woven C/SiC Composites
F. LAMOUROUX & G. CAMUS (France)

Number 3

- 189 Synthesis of Monodispersed Silica Powders I. Particle Properties and Reaction Kinetics
H. GIESCHE (USA)
- 205 Synthesis of Monodispersed Silica Powders II. Controlled Growth Reaction and Continuous Production Process
H. GIESCHE (USA)
- 215 Residual Carbon Detection in Barium Titanate Ceramics by Nuclear Reaction Technique
C. PROUST, E. HUSSON, G. BLONDIAUX & J. P. COUTURES (France)
- 221 Influence of High Pressures and Temperatures on the Behaviour of Bismuth-Based Superconductors
T. A. PRIKHNA, V. S. MELNIKOV, V. V. KOVYLYAEV, V. E. MOSHCHIL, S. N. DUB, A. P. SHAPOVALOV, P. A. NAGORNY, P. P. GORBIK & V. F. SOLOVYOV (Ukraine)
- 227 Grain Boundary Modifications of Manganese Ferrites
J. H. BOY & G. P. WIRTZ (USA)
- 237 Interactions in the Sol-Gel Processing of Alumina-Zirconia Composites
V. SRDIĆ & L. RADONJIĆ (Yugoslavia)
- 245 Chemical Vapour Infiltration of TiB_2 and TiN in Porous Al_2O_3
J. P. DEKKER, P. J. VAN DER PUT, H. J. VERINGA & J. SCHOONMAN (The Netherlands)
- 257 Thermal Fatigue Resistance of CVD SiC/C Functionally Gradient Material
M. SASAKI & T. HIRAI (Japan)
- 261 Yttrium Oxynitride Glasses: Properties and Potential for Crystallisation to Glass-Ceramics
S. HAMPSHIRE, E. NESTOR, R. FLYNN (Ireland), J.-L. BESSON, T. ROUXEL, H. LEMERCIER, P. GOURSAT, M. SEBAI (France), D. P. THOMPSON & K. LIDDELL (UK)
- 275 Release of Foreign Matter During Sintering of Aluminium Nitride and Silicon Nitride
T. REETZ (Germany), H. W. GÄGgeler & D. T. JOST (Switzerland)

Number 4

- 281 Editorial
- 283 Texture Formation in Al_2O_3 Substrates
A. BÖCKER, H. J. BUNGE, J. HUBER & W. KRAHN (Germany)
- 295 Preparation and Characterization of Mullite–Zirconia Composites from Various Starting Materials
T. KOYAMA, S. HAYASHI, A. YASUMORI & K. OKADA (Japan)
- 303 Processing and Mechanical Properties of a Silicon Carbide Platelet/Alumina Matrix Composite
Y.-S. CHOU & D. J. GREEN (USA)
- 313 Thermal Behavior of Polymer-Derived Ceramics. IV. Si–C–N–O Fibers from an Oxygen-Cured Polycarbosilazane
O. DELVERDIER, M. MONTHIOUX, D. MOCAER & R. PAILLER (France)
- 327 A New Approach for Slow Crack Growth Measurement
C. OLAGNON, J. CHEVALIER, F. SUDREAU & G. FANTOZZI (France)
- 337 Solute Effect on Grain Growth in Ceria Ceramics
D. D. UPADHYAYA, R. BHAT, S. RAMANATHAN, S. K. ROY (India), H. SCHUBERT & G. PETZOW (Germany)
- 343 Pressureless Sintering and Phase Relationship of Samarium α -Sialons
Y.-B. CHENG (Australia) & D. P. THOMPSON (UK)
- 351 The Effect of B_2O_3 Addition on the Direct Sintering of Barium Hexaferrite
O. T. ÖZKAN, H. ERKALFA & A. YILDIRIM (Turkey)
- 359 Factors Affecting the Sintering and the Electrical Properties of Sr-Doped LaCrO_3
P. H. DUVIGNEAUD, P. PILATE & F. CAMBIER (Belgium)
- 369 Thermopower and Electrical Conductivity of Single Crystal and Polycrystalline CoO
G. BORCHARDT (Germany), K. KOWALSKI (France), J. NOWOTNY (Australia), M. REKAS & W. WEPPNER (Germany)
- 377 Glass Formation in the System Y_2O_3 – Al_2O_3 – SiO_2 Under Conditions of Laser Melting
R. HARRYSSON & P. VOMACKA (Sweden)

Number 5

- 383 Progress in the Fabrication of Si_3N_4 Turbine Rotors by Pressure Slip Casting
O. LYCKFELDT, E. LIDÉN, M. PERSSON, R. CARLSSON & P. APELL (Sweden)
- 397 The Design of a Circulating Fluid Bed Reactor for the Carbothermal Synthesis of Silicon Nitride
F. K. VAN DIJEN (Germany)
- 403 A Surface Study on Adsorption of Lignosulphonate on Mixed Si_3N_4 – Y_2O_3 Powder Dispersions
H. FAGERHOLM, L.-S. JOHANSSON & J. B. ROSENHOLM (Finland)
- 411 Nitridation of SiC for the Production of SiC– Si_3N_4 Nanocomposites
E. GOMEZ, T. GÓMEZ-ACEBO, J. ECHEBERRÍA, I. ITURRIZA & F. CASTRO (Spain)
- 419 Fine SiC Inclusions and Grain Boundary Phases in Pressureless Sintered SiAlON
W.-C. J. WEI (Taiwan) & J. W. HALLORAN (USA)
- 427 Structure and Properties of Interlayers in Polymer-Derived C/SiC Composites
R. OSTERTAG, T. HAUG, J. WOLTERS DORF, E. PIPPEL, A. HÄHNEL & R. SCHNEIDER (Germany)

- 441 Thermal and Elastic Properties of Alumina–Silicon Carbide Whisker Composites
L. FABBRI, E. SCAFÈ & G. DINELLI (Italy)
- 447 The Brittle/Ductile Transition in Cubic Stabilised Zirconia
T. J. MARROW, S. G. ROBERTS & A. K. PEARCE-HIGGINS (UK)
- 455 The Effect of Boria and Titania Addition on the Crystallization and Sintering Behavior of $\text{Li}_2\text{O}-\text{Al}_2\text{O}_3-4\text{SiO}_2$ Glass
Y.-M. SUNG, S. A. DUNN & J. A. KOUTSKY (USA)
- 463 Temperature-Stable Dielectric Materials in the System $\text{BaTiO}_3-\text{Nb}_2\text{O}_5-\text{Co}_3\text{O}_4$
D. F. K. HENNINGS & B. S. SCHREINEMACHER (Germany)
- 473 An Initial Stage Model for the Sintering of Constrained Polycrystalline Thin Films
D. R. CARROLL & M. N. RAHAMAN (USA)

Number 6

- 481 On the Mechanism of Delamination Fracture of BaTiO_3 -based PTC Thermistors
C. DEWITTE, R. ELST & F. DELANNAY (Belgium)
- 493 An Evaluation of Ce–Pr Oxides and Ce–Pr–Nb Oxides Mixed Conductors for Cathodes of Solid Oxide Fuel Cells: Structure, Thermal Expansion and Electrical Conductivity
M. NAUER (UK), CH. FTIKOS (Greece) & B. C. H. STEELE (UK)
- 501 Electrical Conductivity and Thermal Expansion of Bi_2O_3 Doped with Pr
CH. FTIKOS (Greece) & B. C. H. STEELE (UK)
- 505 Crystallite Growth Characteristics in Superfine Zirconia Powders and Compacts
J. L. SHI & T. S. YEN (China)
- 511 Mullite Formation by Reaction Sintering of Quartz and $\alpha\text{-Al}_2\text{O}_3$ —A TEM Study
M. SCHMÜCKER, W. ALBERS & H. SCHNEIDER (Germany)
- 517 Glass–Ceramic from Fly Ash with Added MgO and TiO_2
R. CIOFFI, P. PERNICE, A. ARONNE, M. CATAURO & G. QUATTRONI (Italy)
- 523 Mechanical Behaviour and Reliability of Sintered Clinker Portland
J. M. TORRALBA, L. E. G. CAMBRONERO & J. M. RUIZ-PRIETO (Spain)
- 529 Uniaxial Tensile and Creep Behaviour of an Alumina Fibre-Reinforced Ceramic Matrix Composite: I. Experimental Study
F. LAMOUROUX, M. STEEN & J. L. VALLÉS (The Netherlands)
- 539 Uniaxial Tensile and Creep Behaviour of an Alumina Fibre-Reinforced Ceramic Matrix Composite: II. Modelling of Tertiary Creep
F. LAMOUROUX, J. L. VALLÉS & M. STEEN (The Netherlands)
- 549 Liquid-Phase Hot-Pressing and WC-Particle Reinforcement of SiC-Si Composites
B. R. ZHANG (China), F. MARINO & M. FERRARIS (Italy)
- 557 Calculations of Chemical Equilibria in the Mo–B–N System
E. BENKO & A. WYCZESANY (Poland)
- 563 Contributor Index