

## Contents

<b>A. Beran, K.K. Chawla, W.M. Kriven, M. Schmuecker and H. Schneider</b>	327	Hartmut Schneider: An appreciation
<b>H. Schneider, J. Schreuer and B. Hildmann</b>	329	Structure and properties of mullite—A review
<b>J.-C. Chen, C.-S. Chen, H. Schneider, C.-C. Chou and W.-C.J. Wei</b>	345	Atomistic calculations of lattice constants of mullite with its compositions
<b>P. Sarin, W. Yoon, R.P. Haggerty, C. Chiritescu, N.C. Bhorkar and W.M. Kriven</b>	353	Effect of transition-metal-ion doping on high temperature thermal expansion of 3:2 mullite—An in situ, high temperature, synchrotron diffraction study
<b>D. Mazza, S. Ronchetti and A. Costanzo</b>	367	Atomistic simulations on mullite $\text{Al}_2(\text{Al}_{2+2x}\text{Si}_{2-2x})\text{O}_{10-x}$ in a variable range of composition
<b>L. Taherabadi, J.E. Trujillo, T. Chen, J.R. Porter and M.L. Mecartney</b>	371	Observation of dislocation assisted high temperature deformation in mullite and mullite composites
<b>K. Okada</b>	377	Activation energy of mullitization from various starting materials
<b>A.J. Pyzik, C.S. Todd and C. Han</b>	383	Formation mechanism and microstructure development in acicular mullite ceramics fabricated by controlled decomposition of fluorotopaz
<b>C.H. Rüscher, N. Eils, L. Robben and H. Schneider</b>	393	Hydrogen bonding and diffusion in mullite
<b>P. Fielitz, G. Borchardt, P. Mechnich and M. Schmücker</b>	401	Kinetics of alumina segregation in mullite ceramics
<b>B. Hildmann, W. Braue and H. Schneider</b>	407	Topotactic growth of $\alpha$ -alumina platelets on 2/1 mullite single crystal surfaces upon thermal decomposition of mullite in dry and wet atmospheres
<b>M. Schmücker, P. Mechnich, S. Zaefferer and H. Schneider</b>	425	Water vapor corrosion of mullite: Single crystals versus polycrystalline ceramics
<b>S. Ueno, T. Ohji and H.-T. Lin</b>	431	Corrosion and recession of mullite in water vapor environment
<b>S.N. Basu, T. Kulkarni, H.Z. Wang and V.K. Sarin</b>	437	Functionally graded chemical vapor deposited mullite environmental barrier coatings for Si-based ceramics
<b>K.K. Chawla</b>	447	Interface engineering in mullite fiber/mullite matrix composites
<b>W. Yoon, P. Sarin and W.M. Kriven</b>	455	Growth of textured mullite fibers using a quadrupole lamp furnace
<b>W.E. Lee, G.P. Souza, C.J. Mcconville, T. Tarvornpanich and Y. Iqbal</b>	465	Mullite formation in clays and clay-derived vitreous ceramics

**P. Mechnich and H. Schneider**

473 Reaction bonding of mullite (RBM) in presence of scandia  $\text{Sc}_2\text{O}_3$

**J.S. Moya, M. Díaz, C.F. Gutiérrez-González,  
L.A. Diaz, R. Torrecillas and J.F. Bartolomé**

479 Mullite-refractory metal (Mo, Nb) composites

**P. Angerer, R.X. Fischer, M. Schmücker and  
H. Schneider**

493 Alkali gallates with mullite-type structure

**K.J.D. Mackenzie, T. Dougherty and J. Barrel**

499 The electronic properties of complex oxides of bismuth with the mullite structure

I Keyword List

III Notes for Authors