

Contents

Editorial

- A. Krell** 205 Introduction

Introductory Overviews

- A. Krell, T. Hutzler & J. Klimke** 207 Transmission physics and consequences for materials selection, manufacturing, and applications
- J.W. McCauley, P. Patel, M. Chen, G. Gilde, E. Strassburger, B. Paliwal, K.T. Ramesh & D.P. Dandekar** 223 AION: A brief history of its emergence and evolution

- G.C. Wei** 237 Transparent ceramics for lighting

Functional Transparent Ceramics

- H. Hiramatsu, Y. Kamihara, H. Yanagi, K. Ueda, T. Kamiya, M. Hirano & H. Hosono** 245 Layered mixed-anion compounds: Epitaxial growth, active function exploration, and device application
- L. Grigorjeva, D. Millers, A. Kalinko, V. Pankratov & K. Smits** 255 Time-resolved cathodoluminescence and photoluminescence of nanoscale oxides

Ceramic Armor

- J.M. Sands, C.G. Fountzoulas, G.A. Gilde & P.J. Patel** 261 Modelling transparent ceramics to improve military armour
- E. Straßburger** 267 Ballistic testing of transparent armour ceramics
- A. Krell, J. Klimke & T. Hutzler** 275 Advanced spinel and sub- μm Al_2O_3 for transparent armour applications

Raw Materials and Manufacturing Approaches for Ceramics in Laser and Optical Applications

- U. Peuchert, Y. Okano, Y. Menke, S. Reichel & A. Ikesue** 283 Transparent cubic- ZrO_2 ceramics for application as optical lenses
- H.N. Yoshimura & H. Goldenstein** 293 Light scattering in polycrystalline alumina with bi-dimensionally large surface grains
- J. Zhang, L. An, M. Liu, S. Shimai & S. Wang** 305 Sintering of $\text{Yb}^{3+}:\text{Y}_2\text{O}_3$ transparent ceramics in hydrogen atmosphere
- J. Mouzon, A. Maitre, L. Frisk, N. Lehto & M. Odén** 311 Fabrication of transparent yttria by HIP and the glass-encapsulation method
- L. Esposito & A. Piancastelli** 317 Role of powder properties and shaping techniques on the formation of pore-free YAG materials
- B.-N. Kim, K. Hiraga, K. Morita & H. Yoshida** 323 Effects of heating rate on microstructure and transparency of spark-plasma-sintered alumina

Glass Ceramics

- D. Tatar, M.L. Öveçoğlu, G. Özen & B. Erim** 329 Glass transition and crystallization of $0.8\text{TeO}_2 + 0.2\text{CdF}_2$ glass

I Keyword List

II Notes for Authors