

# Table of Contents

<b>Identification of Mg Vacancy in MgO by Positron Lifetime Measurements and First-Principles Calculations</b>	
M. Mizuno, H. Araki, Y. Shirai, F. Oba and I. Tanaka	1
<b>Analysis of the Effect of the Oxide Ion Vacancy on the Crystal Structure of La<sub>1-x</sub>Ca<sub>x</sub>CrO<sub>3-δ</sub> by High-Temperature X-Ray Diffraction under Various Oxygen Partial Pressures</b>	
N. Ohba, E. Oikawa and T. Hashimoto	9
<b>Synthesis and Characterization of Lithium Ion Conductors, Li<sub>3</sub>InBr<sub>6</sub> and their Substituted Compounds</b>	
Y. Tomita, H. Matsushita, Y. Maeda, K. Kobayashi and K. Yamada	17
<b>Oxygen Diffusion in La<sub>2-x</sub>Sr<sub>x</sub>CuO<sub>4-δ</sub>: Molecular Dynamics Study</b>	
S.N. Savvin, G.N. Mazo and A.K. Ivanov-Schitz	27
<b>Review: Stress-Induced Diffusion and Cation Defect Chemistry Studies of Perovskites</b>	
K. Salama, G. Majkic and U.(. Balachandran	43
<b>Transport and Electrochemical Properties of Li<sub>y</sub>Ni<sub>x</sub>Mn<sub>2-x</sub>O<sub>4</sub> (0.1 ≤ x ≤ 0.5) Cathode Materials</b>	
J. Molenda, M. Ziemnicki, K. Świerczek and J. Marzec	65
<b>Static and Dynamic Heterogeneities in Supercooled SiO<sub>2</sub></b>	
V.V. Hoang	77
<b>Charge Distribution and Magnetic Interactions in PrBa<sub>2</sub>Cu<sub>3</sub>O<sub>7</sub> with Substitutional Defects and Oxygen Disorder: the ab initio Approach</b>	
M. Łuszczek	95
<b>Grain Boundary Defects in ZnO Ceramic Doped with Mo</b>	
M. El-Hofy	107
<b>Elucidation of Ionic Conduction in Oxide Electrolytes by AC Method (Dielectric Relaxation Processes in La<sub>1-x</sub>Sr<sub>x</sub>Ga<sub>1-x+0.1</sub>Ti<sub>x-0.1</sub>O<sub>3-δ</sub>)</b>	
E. Iguchi, M. Kurumada and S. Mochizuki	115
<b>Diffusion of Oxygen at Ceramic Interfaces for High-Temperature Solid Oxide Fuel Cells</b>	
T. Horita, H. Kishimoto, K. Yamaji, N. Sakai, Y.P. Xiong, M.E. Brito and H. Yokokawa	129
<b>Structural Defect Formation in Inorganic Sol-Gel Derived Oxides</b>	
E.V. Frolova and M.I. Ivanoskaya	143
<b>High Oxide Ion Conductivity of (Ba<sub>1-x-y</sub>Sr<sub>x</sub>La<sub>y</sub>)InO<sub>2.5+y/2</sub> Members Derived from the Ba<sub>2</sub>In<sub>2</sub>O<sub>5</sub> System</b>	
K. Kakinuma, H. Yamamura and T. Atake	159
<b>Germanium in Czochralski Silicon</b>	
D.R. Yang and J. Chen	169
<b>Cation Transport in Stabilised Zirconias</b>	
M. Kilo	185
<b>Probing the Effects of SHI and Doping-Induced Defects in Nanocrystalline Spinel Ferrites</b>	
S. Ghosh, A. Gupta, V.R. Reddy, V. Ganeshan, M. Gupta, S.A. Khan, S. Kundu and N. Kumar	255
<b>Size Effect on the Electronic Properties of Doped and Undoped Ceria</b>	
X.- Zhou, W. Huebner and H.U. Anderson	277
<b>Abstracts</b>	1