

ECS/cs

VOL. 3, NO. 12, 2014



**ECS JOURNAL OF SOLID STATE
SCIENCE AND TECHNOLOGY**



Table of Contents

Dielectric Science and Materials

Atomic Layer Deposition of High Quality HfO₂ Using In-Situ Formed Hydrophilic Oxide as an Interfacial Layer

Lei Han, Jie Pan, Qinglin Zhang, Shibin Li, Zhi Chen N155

Effect of Nitrogen on the Physical Properties and Work Function of MoN_x Cap Layers on HfO₂ Gate Dielectrics

Shin-Yu Lin, Yi-Sheng Lai N161

Electronic Materials and Processing

Detection of a Molybdenum Acceptor Level in N-Type Silicon

Steven M. Cox P397

Structural and Optical Properties of Amorphous and Crystalline GeSn Layers on Si

Ruben R. Lieten, Claudia Fleischmann, Sven Peters, Nuno M. Santos, Ligia Marina Amorim, Yosuke Shimura, Noriyuki Uchida, Tatsuro Maeda, S. Nikitenko, Thierry Conard, Jean-Pierre Locquet, Kristiaan Temst, André Vantomme P403

Electronic and Photonic Devices, and Systems

Comparative Studies on InAlAs/InGaAs MOS-MHEMTs with Different Compressive/Tensile-Strained Channel Structures

Ching-Sung Lee, Juan-Chen Yeh, Wei-Chou Hsu, Han-Yin Liu, Bo-Yi Chou Q227

Reduction in the Interfacial Trap Density of Al₂O₃/GaAs Gate Stack by Adopting High Pressure Oxidation

Hajin Lim, Seongkyung Kim, Joon Rae Kim, Sungin Suh, Ji Hun Song, Nae-In Lee, Jae Kyeong Jeong, Hyeong Joon Kim Q232

Luminescence and Display Materials, Devices, and Processing

A Self-Assembled Double-Island Buffer Structure for Improving GaN-Based Materials Grown on Si Substrates

Hsueh-Hsing Liu, Lung-Chieh Cheng, Nien-Tze Yeh, Geng-Yen Lee, Chen-Zi Liao, Jen-Inn Chyi R229

Synthesis and Luminescence Properties of (Sr,Ca)AlSiN₃:Eu²⁺ Phosphors under Atmospheric-Pressure

Hyo Sung Kim, Ken-ichi Machida, Masahiro Itoh, Hiromasa Hanzawa R234

Photoluminescence Properties of Eu³⁺ in Ga₂O₃-Tb₃Ga₅O₁₂:Cr³⁺ Phosphor Synthesized by Metal Organic Deposition

Kenji Sawada, Sadao Adachi R238

Realization of Enhanced Sensitization Effect in CaYAl₃O₇: Ce³⁺, Sm³⁺ Phosphors via Tb³⁺ Ions

Hongling Yu, Xue Yu, Xuhui Xu, Dacheng Zhou, Jianbei Qiu R245

Photoluminescence, Non-Reduction and Thermal Stability Characteristics of Red Phosphors Ca₃La_{3(1-x)}Eu_{3x}(BO₃)₅ Prepared in Reducing Atmosphere

W. B. Dai, J. L. Wang, Y. Y. Ma, Q. Y. Zhang R251

The Photoluminescence Properties of Nanocomposite Thin Films Containing InN Quantum Dots Embedded in Si Matrix

Yang-Ru Lyu, Tsung-Eong Hsieh R258