Journal of the Ceramic Society of Japan

Call for papers

Regional Editor’s Special Issue

Molecular Synthesis Routes towards Advanced Ceramics

on the occasion of the 60th Birthday of Prof. Ralf Riedel

Regional Editor:
Dr. Emanuel Ionescu (Technische Universität Darmstadt, Germany)

Guest Editor:
Prof. Yuji Iwamoto (Nagoya Institute of Technology, Japan)

The planned Special Issue in the Journal of the Ceramic Society of Japan will focus on molecular synthesis approaches for ceramic materials with tailored phase compositions, microstructures and property profiles. One main emphasis of the Special Issue will be set on addressing the intimate relationship between molecular structure / architecture of the precursors and the microstructure / property profile of the resulting ceramics.

Within this context, several classes of molecular precursors as well as various techniques related to their conversion into ceramics are planned to be addressed:

1. Molecular precursors:
   a. element-organic and organometallic compounds (e.g., alane-, borane-, gallane-based compounds, silanes, silazanes, metalloccenes, metal alkoxides, metal amido complexes, metal carbenes, etc.)
   b. macromolecular single-source precursors: sol-gel systems (silica-, metal-oxide-based), preceramic polymers (silicon-containing polymers, polyborazylene, etc.)

2. Synthesis Techniques: Chemical tools towards tailored single-source-precursors

3. Conversion into Ceramics - Thermal treatment, irradiation-assisted techniques (laser, e-beam, ion bombardment etc.), high-temperature/high-pressure techniques

4. Materials - Oxides, nitrides, oxonitrides, carbides, carbonitrides, borides etc.

5. Processing Aspects: Powders, Coatings, Fibers, Monoliths, (Nano)Composites

The present Special Issue will appear on the occasion of the 60th Birthday of Prof. Ralf Riedel (Darmstadt University of Technology, Germany). He has been a member of the editorial board of the Journal of the Ceramic Society of Japan (2005-2006 and 2011-2015).
Prof. Riedel received his PhD in Inorganic Chemistry in 1986 at the University of Stuttgart and spent 6 years as Post Doc at the Max-Planck-Institute for Metals Research in Stuttgart. He has been since 1993 Professor at the Darmstadt University of Technology, Institute for Materials Science. Prof. Riedel is Fellow of the American Ceramic Society and of the European Ceramic Society as well as a member of the World Academy of Ceramics. In 2006 he received an honorary doctorate from the Slovak Academy of Sciences in Bratislava. In 2009 he was awarded with an honorary professorship at the Tianjin University in China.

Prof. Riedel has brought significant contributions within the field of ceramics, especially related to materials synthesis aspects. Thus, he was one of the key players in the early 90ies of the last century pushing the field of polymer-derived ceramics forward. Moreover, he is well known in the ceramic and solid-state chemistry communities for his contribution related to the synthesis of novel materials and crystalline phase by using syntheses in high pressure high temperature conditions. His work and publications in the field of nitrides (e.g., spinel-type silicon nitride, thorium-phosphide type zirconium and hafnium nitrides, the high-pressure phase of MgSiN$_2$, spinel-type gallium oxynitride, first oxynitride of boron etc.) are well known and highly cited.

**Deadline for submission:** April 30, 2016  
**Issue of publication** (tentative): October 2016 issue  
**Categories of contributions:** Reviews, full papers, technical reports, notes and express letters  
*No previously published contribution or contribution under consideration for publication elsewhere should be submitted.*

For details, see the instructions to authors at:  
http://www.ceramic.or.jp/ihensyuj/toukou_j/kitei-e.pdf

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