

Symposium 29:

Liquid-mediated structuring of ceramics and organic-inorganic hybrid materials

Liquid-mediated structuring (LMS) of ceramics and organic-inorganic hybrid materials has been achieved using various techniques such as the sol-gel process and the soft chemical process. LMS processes are suitable for fabricating ceramic materials with various shapes, including particles, fibers, films and monoliths. LMS processes are also applicable for preparation of various kind of nanomaterials including a family of organic-inorganic hybrids. The LMS is therefore related to various background disciplines; organometallic chemistry, inorganic chemistry, coordination chemistry and solid-state chemistry as well as ceramic science and hybrid science. This symposium will bring together experts from various fields in chemistry and materials science.

Although basic concepts of LMS have been recognized as one of the important ideas of developing novel materials, the LMS is still growing and expanding to evolutionary fields of materials science. The goal of this symposium is therefore to present and discuss recent advances in LMS of ceramics and organic-inorganic hybrid materials, ranging from new synthetic methods to application of resultant materials with nano/meso/macro and hierarchical structures.

<PROPOSED SESSION TOPICS>

- Sol-gel process
- Liquid-mediated process
- Nano-scale structuring process
- Meso-scale structuring process
- Powders, fibers, films, monolith and gels
- Porous materials
- Nanoparticles, nanofibers, and nanosheets

<ORGANIZERS>

Enrico Bernardo, University of Padova, Italy
Kiyofumi Katagiri, Hiroshima University, Japan
Il-Doo Kim, KAIST, Republic of Korea
Sanjay Mathur, University of Cologne, Germany
Minoru Osada, Nagoya University, Japan
David Portehault, CNRS, France
Jun Shen, Tongji University, China
Atsushi Shimojima, Waseda University, Japan
Yoshiyuki Sugahara, Waseda University, Japan, email: ys6546@waseda.jp

<INVITED LECTURES>

Tentative invited lecture information is posted in the following URL;
http://www.ceramic.or.jp/pacrim13/list_of_invited_speakers.html#29