

Call for papers

Special issue on "Computational and theoretical nano-materiomics: properties of biological and **de novo** bioinspired materials"

GUEST EDITOR: Markus J. Buehler / MIT

Journal of Computational and Theoretical Nanoscience (CTN)

This special issue of CTN will focus on computational and theoretical efforts towards a quantitative understanding of biological and synthetic bioinspired (and biomimetic) materials (e.g. DNA, proteins, mineralized tissues), their assembly, properties, and interaction with their environment. We emphasize on linking the chemical or molecular, and mesoscopic structures of these materials to macroscopic properties, across various scales, including the impact of genetic mutations, structural flaws and defects, hierarchical structures, solvent changes and other chemical stimuli on the meso- and macroscale properties of the material. A broad variety of computational and theoretical techniques will be covered, including first principles calculations, atomistic and molecular modeling, multi-scale approaches (e.g. coarse-graining), as well as continuum theory based methods. The objective of this special issue is to summarize recent progress made in this exciting field of research, and to highlight opportunities of computational and theoretical efforts to contribute to nanomedicine, nanoscience and nanotechnology. Properties and mechanisms of interest broadly include mechanical, biological/bioactive, optical, thermal, as well as electronic properties.

If you would like to contribute a paper, please respond with a tentative title of your paper and a tentative list of co-authors (please send an email to mbuehler@MIT.EDU and I will send you further information on how to submit the paper).

About the journal: This journal was launched in 2004, and has been developing well over the past several years as a forum for computational and theoretical approaches in advancing nanoscience and nanotechnology. The journal is indexed in major databases including the ISI-Scientific database, Chemistry Citation Index (CCI), Science Citation Index-Expanded (SciSearch), Research Alert, Materials Science Citation Index (MSCI), Current Contents/Physical, Chemical & Earth Sciences (CC/PC&ES), Web of Science, ScienceDirect, Cambridge Scientific Abstracts/METADEX-Engineered Materials Abstracts, Chemical Abstracts. There are no page charges and color illustrations and figures will be printed without any additional cost. The journal website is: <http://www.aspbs.com/ctn/>. Several recent special issues published in CTN have received considerable attention in the community, and I hope that we can make another exciting contribution to this collection.

The deadline for submission to the special issue is March 1, 2009. All papers submitted to this issue will undergo a strict peer review process to ensure high quality articles. We have planned to publish the special issue in late 2009 or early 2010.

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