Materials Focus

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"Multi-component Chalcogenide Glassy Semiconductors (ChGs): Synthesis and Characterization"

The advances in optoelectronic devices are based on the achievements in optics, electronics and last but not least in material science. Amorphous and glassy chalcogenide materials are one of the most important materials used in optoelectronics. Chalcogenide glasses are based on the chalcogen elements S, Se, and Te. These glasses are formed by the addition of other elements such as Ge, As, Sb, Ga, etc. They are low-phonon energy materials and are generally transparent from the visible up to the infrared. Compared to oxide-based glasses, vitreous materials involving chalcogens form a rather new family of glasses which have gained attention, mainly because of their transmission in the mid-infrared. Indeed as low phonon compounds, these heavy-anion glasses allow the fabrication of infrared cameras as well as infrared fibers operating in a large spectral range.

The present issue will be designed to report the research work done on novel multi-component ((binary, ternary and quaternary) alloys of ChGs. Specifically, this issue will explore the new outcomes in terms of physical phenomena and properties of novel multi-component ChGs like phase transitions (Glass transition / crystallization), radiation-induced effects, optical properties, dielectric and electrical properties, thermo-physical and thermo-mechanical properties, etc.

We encourage the submission of innovative full-length research articles and short communications for rapid publication on the aforesaid fields and related disciplines. Experimental as well as theoretical research works are also welcomed that provides some insight of new concepts.

Manuscript Submission

- Manuscripts must be prepared according to Journal's guidelines, available at http://www.aspbs.com/jnan/. Submit your manuscripts in MS word or PDF format online to any of the following email addresses.
- In the cover letter, please mention that the manuscript is submitted for the special issue. All papers submitted to this issue will be subject to a strict peer review process to ensure high quality articles. Mention the name of three potential referees with their contact address and designation in the cover letter.
- Authors should submit a statement of novelty and originality in the cover letter to ensure that that the submitted paper is original and it is neither published previously nor submitted to any other journal presently and will not be submitted somewhere else before a final decision is made by this journal.

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Important Dates:
Last date of manuscript submission: November 25, 2016
Completion of Review Process: December 25, 2016
Publication date: January, 01, 2017