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WEBINAR SERIES

Presented by

MRS Bulletin

3D Integrated Circuits: Materials Challenges

Wednesday, March 25 | 12:00 pm - 1:30 pm (ET)

The fabrication of mobile and other electronic devices by three-dimensional integrated circuits (3D ICs) is receiving wide attention. The concept of using 3D ICs to extend the limit of Moore's Law, by combining chip technology and packaging technology, has been explored for more than 10 years. However, we still do not mass produce 3D IC devices due to low yield and reliability, along with high cost. Most problems are caused by materials selection and integration at the small scale. The presentations in this webinar will cover some of the important aspects of materials challenges in 3D ICs.

This webinar expands on research that is featured in the March 2015 Issue of *MRS Bulletin*.

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Submission Deadline—July 1, 2015

Early Career Scholars in Materials Science Annual Issue

This inaugural Special Issue invites full length research and review articles by materials researchers who have completed their PhD within 8 years of submission, for peer review and publication in the January 2016 issue. The Special Issue provides a unique opportunity to be highlighted and promoted early in one's research career. To increase attention to these papers, this issue will be published on an **open access** basis. Although some papers may have multiple authors, only the Early Career Scholar submitting the paper will be identified with a photo and brief biography when the paper is published. Authors from around the world are invited to submit papers that span the topical coverage of *JMR* including advanced ceramics, metals, polymers, composites, and combinations thereof related to energy, electrical, magnetic, optical, and structural properties and related applications and reporting on:

Contributed papers are solicited in the following areas:

- ◆ Advanced characterization methods and techniques
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- ◆ Fundamental materials science
- ◆ Interfacial science as relates to material process understanding and improvements
- ◆ Material property enhancements through advances in materials processing
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- ◆ Material combinations and design that improve system performance
- ◆ Nanoscience and nanotechnology

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To be considered for the issue, the Early Career Scholar must be listed as the first and lead author and confirm in the submission letter that they have completed their PhD within 8 years at the time of submission. Also, the manuscript must report new and previously unpublished results. Review articles are invited but must be approved by the lead guest editor before submission. Manuscripts must be submitted via the *JMR* electronic submission system by **July 1, 2015**. Manuscripts submitted after this deadline will not be considered for the issue due to time constraints on the review process. **Submission instructions may be found at www.mrs.org/jmr-instructions**. Please select "**Special Issue: Early Career Scholars in Materials Science**" as the manuscript type. **Note our manuscript submission minimum length of 6000 words**. All manuscripts will be reviewed in a normal but expedited fashion. Papers submitted by the deadline and subsequently accepted will be published in the Special Issue. Other manuscripts that are acceptable but cannot be included in the issue will be scheduled for publication in a subsequent issue of *JMR*.

Papers will be accompanied by a photo and short bio of the lead author. These materials must be submitted along with the original submission of the paper.

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The Materials Research Society (MRS®) is a not-for-profit scientific association founded in 1973 to promote interdisciplinary goal-oriented basic research on materials of technological importance. Membership in the Society includes over 16,000 scientists from industrial, government, and university research laboratories in the United States and abroad.

The Society's interdisciplinary approach to the exchange of technical information is qualitatively different from that provided by single-discipline professional societies because it promotes technical exchange across the various fields of science affecting materials development. MRS sponsors two major international annual meetings encompassing many topical symposia, as well as numerous single-topic scientific meetings each year. It recognizes professional and technical excellence, conducts tutorials, and fosters technical exchange in various local geographical regions through Section activities and Student Chapters on university campuses.

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