

Advanced methods of plasma-based deposition and functionalizing surface treatments enable local control of material chemistry with a high degree of freedom through complex interactions and out-of-equilibrium conditions. In March 2012, Journal of Materials Research will publish a special Focus Issue highlighting the state of the art of plasma chemistry and physics for materials synthesis. Current progress in low energy (>5kV) ion-beam processing of surfaces, thin films, and nanostructures will also be featured.

Submission Deadline-July 15, 2011

### Contributed papers are solicited in the following areas:

- ◆ Plasma-based ion implantation, subplantation, etching, and deposition
- Ionized physical vapor deposition
- ◆ Progress in plasma-based methods for TCO synthesis and growth
- Filtered cathodic arc deposition of metastable nitrides and carbides
- High-power impulse magnetron sputtering of novel thin-film materials
- ◆ Phase formation in oxide layers synthesized by pulsed deposition techniques
- $\bullet\,$  New applications of plasma-immersion ion implantation and deposition
- $\bullet\,$  Hybrid physical vapor deposition for preparation of nanocomposite films
- ◆ Plasma-assisted chemical vapor deposition
- Surface functionalization using atmospheric DBD treatments

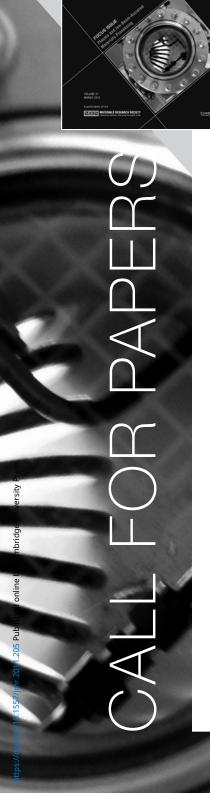
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### MANUSCRIPT SUBMISSION

To be considered for this issue, new and previously unpublished results significant to the development of this field should be presented. The manuscripts must be submitted via the JMR electronic submission system by July 15, 2011. 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 "Focus Issue: Plasma and Ion-Beam Assisted Materials Processing" as the manuscript type. All manuscripts will be reviewed in a normal but expedited fashion. Papers submitted by the deadline and subsequently accepted will be published in the Focus Issue. Other manuscripts that are acceptable but cannot be included in the issue will be scheduled for publication in a subsequent issue of JMR.





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