



CALL FOR PAPERS

Abstract Deadline: November 2, 2010

REMINDER:

In fairness to all potential authors,
late abstracts will not be accepted.

www.mrs.org/spring2011

MRS Symposium S: Plasma-assisted Materials Processing and Synthesis

Plasma surface treatments enable local control of the material chemistry with a high degree of freedom through complex interactions and out-of-equilibrium conditions enabled by energetic particle bombardment. This often results in new phases or metastable states directly impacting the chemical, physical, and morphological properties of the material. The symposium will be dedicated to the advanced methods of plasma-based deposition and functionalizing surface treatments. The contributions dealing with the synthesis/modification and properties of new or key materials such as transparent conductive oxides, MAX phases, nanocomposites, complex metal alloys, and diamond-like carbons are particularly welcome.

Topics for both oral and poster sessions will include (but will not be limited to):

- Filtered cathodic arc deposition of metastable nitrides and carbides
- High-power impulse magnetron sputtering of novel thin-film materials
- DC and pulsed magnetron sputter deposition of transparent conductive oxide films
- Phase formation in oxide layers synthesized by pulsed arc evaporation and pulsed laser deposition
- New applications of plasma immersion ion implantation and deposition
- Hybrid physical vapor deposition for preparation of nanocomposite films
- Ion-beam-assisted PVD methods of ultrathin layers
- Plasma-assisted chemical vapor deposition
- Surface functionalization using atmospheric DBD treatments

A joint session with Symposium II: *Ion Beams—New Applications from Mesoscale to Nanoscale* is being considered.

Also, a **tutorial** to review the state-of-the-art of high-ion flux deposition tools such as PLD, HIPIMS, and Filter Cathodic Arc is tentatively being planned. Further information will be included in the MRS Program that will be available online in January.

Invited speakers include:

M. Bilek (Univ. of Sidney, Australia), **J. Brown** (Acree Technologies), **M. P. Delplancke-Ogletree** (Univ. Libre de Bruxelles, Belgium), **K. Ellmer** (Helmholtz-Zentrum Berlin, Germany), **V. Fournée** (INPL-CNRS, France), **R. Gago** (ICMM, Spain), **A. R. González-Elipe** (ICMSE, Spain), **L. Hultman** (Linköping Univ., Sweden), **K. Komvopoulos** (Univ. of California, Berkeley), **J. Krzanowski** (Univ. of New Hampshire), **O. R. Monteiro** (HY-Tech Research Corp.), **J. Schneider** (Aachen Univ., Germany), **M. C. M. van de Sanden** (Technische Univ. Eindhoven, Netherlands), and **F. Yubero** (Inst. de Ciencia de Materiales de Sevilla, Spain). *Additional invited oral and poster presentations will be chosen from the submitted abstracts.*

Symposium Organizers

José Luis Endrino

Instituto de Ciencia de Materiales de Madrid,
Campus de Cantoblanco, E-28049 Madrid, Spain
Tel 34-913-349-000, Fax 34-913-720-623, jlendirino@icmm.csic.es

André Anders

Lawrence Berkeley National Laboratory,
MS 53, 1 Cyclotron Rd., Berkeley, CA 94720
Tel 510-486-6745, Fax 510-486-4374, aanders@lbl.gov

Joakim Andersson

Uppsala University, Angstrom Laboratory,
Box 534, SE-751 21 Uppsala, Sweden
Tel 46-184-713-063, Fax 46-18-55-50-95,
joakim.andersson@fysik.uu.se

David Horwat

Institut Jean Lamour, Parc de Saurupt, CS14234,
F-54042 Nancy, France
Tel 33-383-584-252, Fax 33-383-534-764
david.horwat@ijl.nancy-universite.fr

Mykola Vinnichenko

Institute of Ion Beam Physics and Materials Research,
Forschungszentrum Dresden-Rossendorf, D-01314 Dresden, Germany
Tel 49-351-260-2374, Fax 49-351-260-2703, m.vinnichenko@fzd.de