



Consiglio Nazionale delle Ricerche



Martedì 21 Giugno 2016
Alle ore 11:00

presso l'aula 1 dell'Edificio F,
Area della Ricerca CNR, Via Madonna del Piano, 10 Sesto F.no

La **Dr.ssa Alessandra SANSON**
CNR - ISTECS, Faenza

terrà il seguente seminario:

" Ceramic materials: from tiles to Solid Oxide Fuel cells and Photovoltaic devices"

Il Direttore ICCOM
Dr. Maurizio Peruzzini

Abstract:

Although Ceramic is the most ancient material known to man, its application dating the VIII Century B.C., it has deeply evolved since then, opening the path for the developing of a highly engineered platform for several different applications. Not only bulk and monophasic, the term "ceramic" comprises nowadays several materials such as composites, multiphasic systems and films.

One of the possible applications of this eclectic material is in the energy sector. The aim of this talk is to give a brief overview on the activities done at ISTECS for the study and optimization of ceramic processes and device for energy generation and storage.

From the developing of multilayers devices such as Solid Oxide Fuel Cells (SOFC) and Electrolyzer (SOEC) to the most advanced devices on fibers, the possibilities and challenges related to the production of ceramic devices are presented and discussed.

Biographic sketch:



Alessandra Sanson gained her PhD at Cranfield University (UK) in 2003 and from 2008 is leader of the Materials and Processing for Energetics group of ISTEC. Her main activities concern the synthesis and characterization of advanced ceramics powders and their shaping processes. Among the latter, other than the most common used for bulk materials (pressing, slip-casting and extrusion) she has a solid background in thick film deposition (screen printing, tape casting, etc.). The ceramic processes are mainly devoted to the shaping of devices for production and storage of energy as solid oxide fuel cells (SOFC), solid oxide electrolyzers (SOECs), photovoltaics, gas membranes, etc. She is supervisor of MSc as well as PhD students of Padua and Bologna University and lecturer of “Advanced Ceramics Processing Techniques” and “Ceramics for Energy Applications” of the Chemistry Doctoral School of Bologna University. Since October 2008 she is lecturer of “Industrial Processing for Ceramics” at Istituto Superiore per le Industrie Artistiche (ISIA) of Faenza. Since 2011 she is CNR representative in Airen (Alleanza Italiana per la Ricerca sull’Energia) and in EERA (European Energy Research Alliance). She is co-author of more than 50 papers in international journals and two patent.

