



4<sup>th</sup> International Symposium on  
**E**nergy **C**hallenges & **M**echanics  
- working on small scales

11-13 August 2015  
Aberdeen, Scotland, UK

### Speaker of Session 18

#### **NANOREACTORS DIRECTED PATTERNING OF GOLD PARTICLES IN ENVIRONMENTALLY RESPONSIBLE SYSTEMS**



#### **Dr. Séverine A.E. BOYER**

Researcher with the **French National Centre for Scientific Research (CNRS)**

P PRIME Institute – ISAE-ENSMA, Mechanics and Materials  
Physics Department (Futuroscope, France)

Dr. BOYER inaugurated her career within a special grant (CIFRE, PhD) under an industrial convention with the French Institute of Petroleum - New Energy (IFPEN) for the investigation of the damaging of semi crystalline thermoplastic polymers by explosive gas decompression, through gas/polymer interactions at high temperatures and pressures (Blaise Pascal University, France). She enlarged her field of research within the CREST Program of the Japan Science and Technology Agency on nanoscale ordered (Tokyo Metropolitan University, Japan). She extended further her expertise at the 'École des Mines de Paris' (MINES ParisTech) in polymer patterns and polymer processing (Centre For Material Forming, France).

Dr. BOYER's research is focused on coupling between fluid diffusion and mechanics in polymers, pattern formation in polymers under severe and coupled thermo-chemo-diffuso-mechanical constraints. Development of original characterizations, modeling and numerical simulations are present in several length scales.

#### Selected distinctions:

2003, "The William F. Giaque Memorial Award" from the American Calorimetry Conference

2012, "The ICTAC Young Scientific Award" from the International Confederation for Thermal Analysis and Calorimetry

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