【无机化学论坛】**Pulsed Laser Deposition of oxide materials for photonics and energy**

报告人: **Prof. M. Chaker,**

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**Chaker’s bio-2018**



Professor Chaker has obtained a 3rd cycle thesis in gas and plasma physics at the Université d’Orsay in 1981 and a PhD in plasma physics from Université de Montréal in 1986. In 1989, he was recruited as professor by the Institut national de la recherche scientifique (INRS) in Varennes (Québec). From 1999 to 2002, he has been the director of the Center Energie et Matériaux of INRS, then from 2002 to 2005, the director of the Center Énergie Matériaux  Télécommunications. Holding a Tier 1 Canada Research Chair in Plasmas applied to micro and nanomanufacturing since 2003, he has published over 280 articles in peer-review journals (more than 9700 citations, h index : 54 according to Google Scholar) in various domains, including advanced plasma sources characterization (high-density plasmas and laser-induced plasmas) for applications to thin film synthesis, nanometer etching, nanoparticles production and device fabrication. Prof. Chaker has participated to several committees of national and international funding agencies and to various scientific committees. He is presently the co-director of the International laboratory in Plasma Science and Technology and he is chairing the scientific committee of the LABEX SEAM (Science and Engineering for Advanced Materials and Devices).

**Abstract**

**Pulsed Laser Deposition of oxide materials for photonics and energy**

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Innovation in materials science and engineering resides in our ability to design new materials with tailored properties (electrical, optical, magnetic, etc.) by controlling their microstructure. One of the most powerful means to uniquely arrange matter at such scale is to use plasmas due to their unique ability to provide simultaneously a variety of particles such as ions, neutral atoms and radicals. In this presentation, we will focus on the growth of three specific oxide materials in the form of thin films, namely calcium-barium niobate (CBN), vanadium dioxide (VO2) and samarium nickelate (SNO), using Pulsed Laser Deposition (PLD). There are exploited for various applications including photonics and energy.