
Editorial

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Biographical notes: Mau Chien Dang received his MSc and PhD in Materials Science from the National Polytechnic Institute in Grenoble (Grenoble INP), France in 1991 and 1994. In 1996 and 2007, he received his Master's in Management from the University Pierre Mendès France and the Diploma of Habilitation for Research Direction (DHDR) in Materials and Process Engineering from the Grenoble INP. From 1996 to 2004 he was Head of Dept. of Materials Science Fundamentals, Vice-Dean of Faculty of Material Technology, HCM City University of Technology. Since 2005 he has been Associate Professor. In 2004 he created the Laboratory for Nanotechnology (LNT), VNU-HCM, of which he has been Director since then. He is a member of several national level research bodies and councils. He has authored or co-authored more than 40 publications in peer-reviewed journals and four patents.

Eric Fribourg-Blanc received MSc degree in Electrical Engineering from Ecole Centrale de Lille, France (1997), MSc and PhD in Electronics from University of Valenciennes, France (1997 and 2003). From 2003 he is a Researcher at CEA-LETI, Grenoble, France. His research interests include: microtechnology and microfabrication on silicon and polymers. He spent two years at the Laboratory for Nanotechnology in Vietnam (2009–2010) where he provided expertise and built up RFID and inkjet research activities. He has (co-)authored more than 20 publications in peer reviewed journals and conferences and holds two patents. He is a member of the Materials Research Society.

It is with great pleasure that we are presenting here a selection of the best papers from the 3rd International Workshop on Nanotechnology and Applications (IWNA) held on 10–12 November 2011 in Vung Tau, Vietnam. This conference is co-organised by the Laboratory for Nanotechnology (LNT), Vietnam National University, Ho Chi Minh City, Vietnam, and MINATEC, France, every 2 years in order to bring together all researchers in the field of nanotechnology from Vietnam and abroad.

The selected papers reflect the most prominent research done in Vietnam and through collaborations with international partners in the wide spectrum of nanotechnology. The papers cover several key fields of research in nanotechnology: biosensors, properties of magnetic nanomaterials, titanium dioxide and zinc oxide nanostructures, nanomaterials for photovoltaic applications, and metal, semiconductor and composite nanostructures.

Five papers deal with contributions of nanotechnology to biosensors. These include the detection of harmful chemicals (pesticides), the improvement of the sensitivity of biosensors or the detection of relevant biological molecules for health applications. Two contributions improve the understanding of the behaviour of magnetic materials at the nanoscale, including deviation from laws known for their bulk counterparts. Seven papers present research progress in the oxide nanostructures, indicating a very lively field. Those nanomaterials mostly are the classical titanium dioxide and zinc oxide and some derivatives, but also include a silver phosphate with photocatalytic properties. These papers reflect the importance of these nanostructures for photocatalytic and photovoltaic applications and provide results in improving their applicability. Three papers are introducing new techniques and materials for photovoltaic cell improvement. The other seven papers provide evidence of the still strong need of developing methods to better control the characteristics of nanostructures in the point of view of their applicability. From the control of capping of copper or semiconductor nanoparticles to eliminate oxidation or quenching, to catalytic activity of cobalt or gold nanoparticles, controlled preparation of silicon nanowire, an important material for many application fields, and several composites structures that could benefit photovoltaic or sensor and actuator devices.

We feel that this selection reflects the quality of research performed in Vietnam in nanotechnology and the important preoccupation of the research teams to contribute to long-standing issues, including health, energy and scarcity of resources.

We would like to express our gratitude to the Editorial Board of the *International Journal of Nanotechnology* and especially to Dr. Lionel Vayssieres, the Editor-in-Chief of the *IJNT*, for his kind invitation to publish these contributions.

The guest editors would finally like to extend their thanks to all authors who contributed to this special issue.