PROGRAM VIEW : 2011 Spring & Bilateral**MY PROGRAM : 2011 Spring & Bilateral****Symposium : K**

Protective coatings and thin films

09 May 2011	10 May 2011	11 May 2011	12 May 2011	13 May 2011
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08:40	Atmospheric pressure PECVD for photovoltaic applications Authors : Françoise MASSINES PROMES, Laboratoire Procédés, Matériaux et Energie Solaire Tecnosud, Rambla de la Thermodynamique, 66100 Perpignan, France	3 1
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09:20	Extremely bright excitonic Photoluminescence from intermixed CuBr/KBr microdots Authors : A. Cowley ¹ , Rajani K V ¹ , P.J. McNally ¹ . 1. Nanomaterials Processing Laboratory, Research Institute for Networks and Communications Engineering (RINCE), School of Electronic Engineering, Dublin City University, Dublin 9, Ireland.	3 2
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09:40	STRUCTURAL PROPERTIES OF SnOx THIN FILMS Authors : Igor Djerdja, Davor Gracina, Krunoslav Juraića and Miran Čehb Igor.djerdj@irb.hr (a) Ruđer Bošković Institute, Bijenička c.54 10000 Zagreb, Croatia (b) Jožef Stefan Institute, Jamova 39, 1000 Ljubljana, Slovenia	3 3
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10:00	Break	
10:40	Investigation of grain boundary in sputtered Mo films applied in Cu(In _{1-x} Ga _x)Se ₂ -based solar cell Authors : E. Gautron, M. Tomassini, L. Arzel, N. Barreau Institut des Matériaux Jean Rouxel (IMN)-UMR 6502, Université de Nantes, CNRS, 2 rue de la Houssinière, BP 32229, 44322 Nantes Cedex 3, France	3 4
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11:00	Sputter deposited transition metal nitrides as back electrode for CIGS solar cells Authors : W.P. Leroy, S. Mahieu, D. Depla Research Group DRAFT, Dept. Solid State Sciences, Ghent University Resume : Thin Film solar cells exhibit many advantages over their crystalline counterpart, as e.g. the possibility to apply them to flexible and light-weight substrates. Due to the small thickness of the active layers (and hence only a limited material usage), these solar cells can be produced at a relatively low price, which also gives them advantages in many applications. A possibility to decrease the thickness of the absorber layers is the use of back electrodes which exhibit a high reflectivity in the red and near-infrared region. This would enable to compensate for the absorption losses (and hence a lower efficiency), when the absorber thickness is decreased. Metal foils (stainless steel, Ti or Cu foils) are often used as flexible substrate for the fabrication of the thin film solar cells, as these foils can withstand the relatively high temperatures which are often needed during the fabrication process. However, impurities coming from the metal foils, tend to diffuse into the absorber layer, causing a reduced efficiency of the absorber layer. Transition metal nitrides are known to have good barrier properties and a high thermal stability. Additionally, they have well known electronic properties which predict a good influence on the performance of the solar cell. This work deals with transition metal nitrides (TiN, ZrN) grown via reactive magnetron sputter deposition, where several deposition conditions (total pressure, N ₂ partial pressure, target-substrate distance and the type of noble gas) were varied. Through a thorough determination of the substrate fluxes such as the total energy flux and the momentum flux, a correlation to the thin film properties is sought. This will allow for a better control and an improved deposition of highly reflective transition metal nitrides. As a second step, the diffusion barrier properties at higher temperatures were investigated on some metal foils.	3 5
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- 11:20 Influence of P3HT:PCBM blend composition on performance of organic photovoltaic devices
 Authors : O. Haas¹, F. Reisdorffer¹, P. Le Rendu¹, T.P. Nguyen¹, Y. Bouclé², G. Boloma², B. Ratier² ¹Institut des Matériaux Jean Rouxel, Université de Nantes, CNRS, 44322 Nantes, France. ²XLIM, Université de Limoges/CNRS, 87060 Limoges, France. 3 6
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- 11:40 Work Function Engineering of Carbon Nanotube Based Transparent Electrodes for OPV and OPD applications
 Authors : K. Saint-Aubin ^a, E. Spadafora ^b, B. Grévin ^b, R. Demadrille ^b, J.M Verilhac ^a, C. Celle ^a, J.P. Simonato ^a ^aCEA-Grenoble, LITEN/DTNM/LCRE, 17 rue des Martyrs, 38054 Grenoble Cedex 9, France ^bCEA-Grenoble, INAC/SPRAM/LEMOH, 17 rue des Martyrs, 38054 Grenoble Cedex 9, France 3 7
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- 12:00 Lunch
- 14:00 Nanocomposite and Nanostructured Films with Plasma Polymer Matrix
 Authors : Hynek Biederman, Ondrej Kylian, Martin Drabik, Olexandr Polonskyi, Pavel Solar Charles University in Prague Department of Macromolecular Physics Faculty of Mathematics and Physics V Holesovickach 2 180 00 Prague 8 Czech Republic 7 1
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- 14:40 Single-chamber deposition of multilayer barriers by Plasma Enhanced and initiated CVD of organosilicones
 Authors : Anna Maria Coclite, Karen K. Gleason Department of Chemical Engineering, Massachusetts Institute of Technology, Cambridge, MA 02139, USA 7 2
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- 15:00 Two-dimensional amine-functionality gradient by plasma polymerization
 Authors : Dave Mangindaan and Meng-Jiy Wang* Department of Chemical Engineering National Taiwan University of Science and Technology 7 3
- [add to my program](#) [\(view full abstract\)](#)
- 15:20 In situ production of titania particules by atmospheric plasma polymerization of hexamethyldisiloxane/allylamine
 Authors : J. PETERSENa,b, V.BALLa,b, M. MICHEL^a, A. DINIAc and D.RUCHa ^a. Department of Advanced Materials and Structures (AMS), Centre de Recherche Public Henri Tudor, Rue de Luxembourg 66, L4221 Esch sur Alzette, Luxembourg ^b. Institut National de la Santé et de la Recherche Médicale, Unité Mixte de Recherche 977, 11 rue Humann, 67085 Strasbourg, France. ^c. Institut de Physique et Chimie des Matériaux de Strasbourg, (IPCMS) UMR 7504 CNRS-ULP, 23 rue du Lœss, BP 43, 67034 Strasbourg Cedex 2, France. 7 4
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- 15:40 Plenary Session

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