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• 2015 Spring

- Symposia & program
- Plenary session
- Exhibitors Workshop
- EU-40 Materials Prize
- Summer school CO2
- Tutorials

• 2015 Fall

- Symposia & program
- Plenary session
- Exhibition
- Materials weekend - tutorials
- Summer school CO2
- M-ERA-NET

2014 ▼

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2015 Fall in Warsaw University of Technology



The 2015 E-MRS Fall Meeting and Exhibit will be held in Warsaw University of Technology, from **September 15 to 18 (Tuesday-Friday)**.

ONLINE REGISTRATION CLOSED

On-site registration starts on **Monday Sept 14 (12:00-18:00)**

The conference will include 22 parallel symposia, one plenary session, one exhibition and much more.

The Fall Meeting will be tightly connected with another materials-related conference EUROMAT (21-24 Sept.), organized by FEMS, at the same venue (Warsaw University of Technology), immediately following the Fall Meeting.

There will be a "Materials Weekend", 19-20 September, organised jointly by E-MRS and FEMS between the conferences. It will consist of lectures, tutorials, political events, etc ...

More information on <http://materialsweekend.pl/>

Both conferences are under the auspices of the **European Materials Forum (EMF)**.

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|-------|---|---|--------------|
| 09:00 | Connectivity, memory and neuromorphic function in transparent conducting networks of inorganic nanowires | ∨ | G.5.1 |
| 11:50 | A new look on the properties of oxygen vacancies in a-IGZO | ∨ | G.6.3 |
| 12:10 | <p>Ga doped ITO transparent conductive oxide: Optical and electrical properties at different deposition conditions</p> <p>Authors : Andrej Čampa¹, Marko Berginc¹, Katarina Vojisavljević², Barbara Malič², Peter Panjan², Marko Topič¹</p> <p>Affiliations : ¹ University of Ljubljana, Faculty of Electrical Engineering, Laboratory of Photovoltaics and Optoelectronics, Trška cesta 25, 1000 Ljubljana, Slovenia ² Joef Stefan Institute, Jamova cesta 39, 1000 Ljubljana, Slovenia</p> <p>Resume : In the optoelectronics, especially in thin-film photovoltaics, the transparent conductive oxides (TCO) play an important role to minimize the front contact optical losses. The TCOs used as a front contact needs to have low resistivity (<1 mOhmcm), high optical transparency in the broad wavelength region (>80% at 400-1000 nm) and high temperature stability. In the case of using nano-imprinted lithography for reproduction of the morphologies the good electrical and optical properties should be obtained at low deposition or post-annealed temperatures. To translate the morphology, at which the light is efficiently scattered, to the internal interfaces of the solar cells very low thickness of TCO is required (<200 nm). One of such candidates is Ga doped SnO₂:In (ITO), which exhibits better optical and similar electrical properties to ITO 90/10, additionally it has lower indium content. A multicomponent Ga-In-Sn oxide target with Ga:In:Sn = 4:64:32 metal ratio was prepared, that was used in RF sputtering system for deposition of high quality GITO thin-film layers on glass. In this study, we will focus on electrical (specific resistivity, mobility and carrier concentration) and optical properties (thickness and refractive index) as a function of deposition and annealing parameters. The results of optical and electrical characterization of the two best GITOs will be presented, one globally optimized and one optimized with the respect to the low temperature deposition prerequisite.</p> | ∧ | G.6.4 |