

TRAINING SEMINAR

September 8 – 9, Sofia

MONDAY, SEPTEMBER 8

9:00 – 9:30 OFFICIAL OPENING

SESSION 1: Metal Oxide Thin Films – Novel
Technologies and Applications

9:30 – 10:10

F. Hamelmann (*Bielefeld University of Applied
Sciences, Germany*) Metal oxide thin films for improved
photovoltaic solar energy conversion

10:10 – 10:50

J. Weicht (*Bielefeld University of Applied Sciences,
Germany*) Solar cells based on a-Si and a-Si/ μ c-Si -
modeling of light-induced degradation.

11:00 – 12:00 Visit of Central Laboratory of Solar
Energy and New Energy Sources

12:00 – 14:00 LUNCH

14:00 – 16:30 Visit of Institute of Solid State Physics
laboratories

TUESDAY, SEPTEMBER 9

SESSION 2: Metal oxide films – Novel Technologies
and Applications

9:30 – 10:10

B. Stefanov (*Uppsala University*) Improved
photocatalytic activity of nanostructured metal oxide
thin films

10:10 – 10:50

S. Boyadjiev (*Technical University, Sofia; Budapest
University of Technology and Economics, Hungary*)
Photocatalytic and gas sensing properties of transition
metal oxides nanocomposites prepared by ALD

11:00 – 12:00 Visit of the Institute of Solid State
Laboratories

12:00 – 14:00 LUNCH

14:00 – 16:30 Social tour in Sofia area – visit
historical and cultural places

INERA

Research and Innovation Capacity
Strengthening of ISSP-BAS
in Multifunctional Nanostructures
REGPOT-2012-2013-1



ORGANIZING COMMITTEE

Chairperson: K. Gesheva

Secretary: A. Szekeres

Members:

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<http://www.issp.bas.bg>

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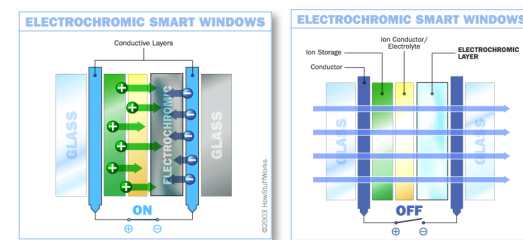


Transition Metal Oxide Thin
Films

*Functional Layers in “Smart Windows”
and Water Splitting Devices:
Technology and Optoelectronic
Properties*

September 4 – 6, 2014

Varna, Bulgaria



Organized by

Institute of Solid State Physics

Bulgarian Academy of Sciences in the frame
of FP7 Project REGPOT 316309 INERA

THURSDAY, SEPTEMBER 4

9:00 – 9:30 OFFICIAL OPENING

SESSION A: Metal oxide films - functional layers in energy efficient devices

Chairperson: F. Hamelmann

9:30 – 10:10

G. Niklasson (*Uppsala University, Sweden*)

Functional vanadium oxide thin films: electronic, optical and thermochromic properties

10:10 – 10:30 COFFEE BREAK

10:30 – 11:10

K. Gesheva (*CLSENEs, Bulgaria*)

CVD-transition metal oxide coatings for electrochromic “Smart windows”

11:10 – 11:50

M. Aleksandrova (*Technical University of Sofia, Bulgaria*)

Oxide coatings on flexible substrates for electrochromic applications

12:00 – 14:00 LUNCH

SESSION A

Chairperson: K. Gesheva

14:00 – 16:00 Short presentation of young participants in Poster Session A

16:30 – 17:00 COFFEE BREAK

17:00 – 18:30 Poster Session A

FRIDAY, SEPTEMBER 5

SESSION B: Photocatalysts and chemical sensing

Chairperson: G. Niklasson

9:00 – 9:40

L. Osterlund (*Uppsala University, Sweden*)

Photocatalytic oxide films in the built environment

9:40 – 10:20

I. Szilagyi (*Budapest University of Technology and Economics, Hungary*)

Nanostructured photocatalysts by Atomic Layer Deposition (ALD)

10:20 – 10:40 COFFEE BREAK

10:40 – 11:20

G. Popkirov (*CLSENEs, Bulgaria*)

Thin oxide films electrodes for photocatalytic water splitting

11:20 – 12:00

I. Mihailescu (*National Institute for Lasers, Plasma and Radiation Physics, Romania*)

Pulsed laser deposition of thin oxide films for applications in chemical sensing and biological pollution

12:00 – 14:00 LUNCH

SESSION C: Novel thin film technologies and applications

Chairperson: L. Osterlund

14:00 – 14:40

F. Hamelmann (*Bielefeld University of Applied Sciences, Germany*)

Transparent conductive oxides in thin film photovoltaics

14:40 – 15:20

E. Iordanova (*ISSP, Bulgaria*)

Femtosecond lasers - new technological opportunities

15:20 – 15:40 COFFEE BREAK

15:40 – 18:00 Short presentation of young participants in Poster Sessions B and C

18:00 – 19:30 Poster Sessions B and C

SATURDAY, SEPTEMBER 6

SESSION D: Methods of thin films characterization

Chairperson: G. Popkirov

9:30 – 10:10

V. Ivanov (*University of Sofia, Bulgaria*)

Modern applications of Raman Spectroscopy

10:10 – 10:50

A. Szekeres (*ISSP, Bulgaria*)

Application of Ellipsometry in studies of metal oxide thin films

10:50 – 12:00 Student awards CLOSING

12:00 – 14:00 LUNCH

14:00 – 19:00 FREE TIME, SOCIAL EVENT

19:00 GALA DINNER