



# JOINT FINAL CONFERENCE OF COST ACTIONS IE0601 and MP0601 14-18 November 2011

Research Centre of the Polish Academy of Sciences in Paris, rue Lauriston 74 Dedicated to the memory of Professor Zsolt Kajcsos (1946-2011)

IE0601 Wood Science for Conservation of Cultural Heritage 14–15 November Joint Session Photon Technologies for Conservation of Wooden Cultural Heritage 16 November

MP0601 Short Wavelength Laboratory Sources 17–18 November Organizers for COST Action MP0601: Janusz Lekki & Alan Michette

**Preliminary Programme for COST Action MP0601** 

16 November	Joint Session Photon Technologies for	
	Conservation of Wooden Cultural Heritage	
09.00 - 09.15	In memory of Professor Zsolt Kajcsos	
09.15 - 10.45	Session managed by Action IE0601	Including a report on synergy
		activity by the Actions' Chairs
10.45 - 11.15	Coffee break	
11.15 - 12.30	Session managed by Action MP0601	2 oral presentations <sup>‡</sup>
12:30 - 14:00	Lunch	
14.00 - 18.00	Visits*	
20.00	Conference dinner during a cruise on the	
	Seine	
17 November		
09.00 - 11.00	Registration and Poster Session, with coffee	
	at 10:30	
11:00 – 11:45	Keynote talk by External Evaluator	
11:45 – 12:35	Oral presentations, session I	2 presentations <sup>¶</sup>
12.35 - 13.45	Lunch	
13.45 - 15.25	Oral presentations, session II	4 presentations <sup>¶</sup>
15:25 – 16:00	Coffee break	
16:00 – 17:40	Oral presentations, session III	4 presentations <sup>1</sup>
18 November		
09:00 - 10:40	Oral presentations, session IV	4 presentations <sup>¶</sup>
10:40 - 11:10	Coffee break	
11:10 – 12:50	Oral presentations, session V	4 presentations <sup>¶</sup>
12:50 - 14:00	Lunch	
14:00 – 15:30	Evaluation session A	
15:30 – 16:00	Coffee break	
16:00 - 17:30	Evaluation session B	

<sup>&</sup>lt;sup>‡</sup>30 minutes plus 5 minutes for questions. See next page for details.

- Centre de Recherche et Restauration des Musées de France, le Louvre
- Cité de la Musique
- Synchrotron SOLEIL in Saclay

<sup>\*</sup> Participants can select one of the following three visits:

<sup>&</sup>lt;sup>¶</sup>20 minutes plus 5 minutes for questions. See following pages for details.

### Wednesday 16 November

#### Joint Session Photon Technologies for Conservation of Wooden Cultural Heritage

IE0601\_1 E.H. Lehmann, D. Mannes, K. Hunger, M. Wörle, S. Braovac, H. Kutzke, M. Christensen *Wood investigations by means of radiation transmission techniques in the analysis of cultural heritage objects of different size scale*.

IE0601\_2 Jan Van den Bulcke, Denis Van Loo, Manuel Dierick, Matthieu Boone, Bert Masschaele, Yoni De Witte, Kristof Haneca, Koen Deforce, Maaike De Ridder, Wannes Hubau, Hans Beeckman, Luc Van Hoorebeke, Joris Van Acker *Multi-resolution x-ray tomography for multi-purpose use in cultural heritage*.

IE0601\_3 Łukasz Bratasz High resolution x-ray radiography for monitoring wood impregnation.

11:15-12:20 MP0601 1 Alexei Erko Nanometre optics technologies at Helmholtz Centre Berlin

12:20-12:55 MP0601\_2 Jeremy Frey X-ray imaging and phase reconstruction with HHG sources

## **Thursday 17 November**

#### Posters (09:00-11:00, during Registration and Coffee)

Przemyslaw Wachulak A 50nm spatial resolution EUV imaging using incoherent, desk-top plasma source Vladimir Ac Advanced simulations of heat load at photon and electron interactions with the matter Sebastian Bozek Cultured cells irradiation with X-ray microprobe – biological experiment and numerical simulations of the dose

Ivan Yakimchuk Ellipsoidal concentrators for laboratory x-ray sources: analytical optimization Vasily Zakharov EUV and soft X-ray spectral modeling for nonequilibrium gadolinium plasma Veronika Pickova, Radka Havlíková, Ladislav Pina Focusing EUV radiation from the capillary discharge

Jakub Bielecki Investigations of complex structures by means of the x-ray computed microto-mography method

Jesus Alverez Ruiz Synchrotron X-ray photoabsorption spectroscopy of plasmas

Robert Mroczka X-ray capillaries with a lacquer-metal internal bilayer for focusing hard X-rays

Niksa Krstulovic, Robert Stefanuik X-ray emission from plasma induced by dual pulse laser ablation with the ns and fs pulses

## **Thursday 17 November**

Session I (Chair: Alan Michette)

11:00-11:45 Keynote Lecture Anatoly Snigirev 15 years of X-ray refractive optics

**11:45-12:10** I\_1 Francois De Gaufridy de Dortan *Progress in the simulation of short wavelength sources during the 5 years of COST MP0601* 

**12:10-12:35** I\_2 Alexander Vinogradov Reflection imaging of objects coherently illuminated at grazing angles

#### Session II (Chair: Davide Bleiner)

**13:45-14:10** II\_1 Paolo Di Lazzaro Mitigation and selection of ion and particulate emission from laser-plasma sources used for extreme ultraviolet lithography sources

**14:10-14:35** II 2 Klaus Mann *NEXAFS spectroscopy with table-top XUV source* 

14:35-15:00 III 3 Takeshi Higashiguchi Extreme ultraviolet alkali metal source at 40 nm

15:00-15:25 II\_4 Vladimir Zvorykin Powerful X-ray source on the basis of CW 600-keV electron LINAC

### Session III (Chair: Dusan Korytar)

**16:00-16:25** III\_1 Michela Fratini *Towards an advanced X-ray source based on field emitting carbon nanotubes cold cathode: latest updates* 

**16:25-16:50** III\_2 Larissa Juschkin Investigation and optimisation of spatial and spectral characteristics of EUV emission from laser assisted vacuum arc

16:50-17:15 III 3 Sergey Bobashev Photoionization devices for diagnostic of X-ray intensive radiation

**17:15-17:40** III\_4 Matthew Shand Development and characterization of optical elements for soft X-ray micro-probing and microscopy

### Friday 18 November

## Session IV (Chair: Stefano Lagomarsino)

**09:00-09:25** IV\_1 Peter Hoghoj *Grazing incidence aspheric and multilayer coated optics for x-ray sources* 

**09:25-09:50** IV 2 Piergiorgio Nicolosi Multilayer coatings for Space applications

**09:50-10:15** IV\_3 Johannes Hauck *Characterization and optimization of an imaging micro-channel plate EUV detector with high temporal resolution* 

**10:15-10:40** IV\_4 Stefan Herbert Novel CMOS detector design for fast imaging applications in the extreme ultraviolet

### Session V (Chair: Leszek Ryc)

11:10-11:35 V 1 Serhiy Danylyuk EUV interference lithograph with partially coherent sources

11:35-12:00 V 2 Boris Roshchin Laboratory X-ray reflectometer for liquid interfaces investigation

**12:00-12:25** V\_3 Ruben Seisyan *The two pulses two colour system of EUV radiation LPP source and of 4m Bragg mirror lens for laboratory EUV lithography tool: Development of the ISTC project #3857* 

12:25-12:50 V\_4 Kai Sven Schulze Time-resolved experiments with a laser-driven x-ray diode

# Friday 18 November

#### **Evaluation Session A**

This session is open to all participants.

**14:00-14:15** ES\_1 Francois De Gaufridy de Dortan *Summary of WG1 activities* (10 minutes + 5 minutes discussion)

**14:15-14:30** ES\_2 Andrzej Bartnik (substituting for Henryk Fiedorowicz) *Summary of WG2 activities* (10 minutes + 5 minutes discussion)

**14:30-14:45** ES 3 Ladislav Pina *Summary of WG3 activities* (10 minutes + 5 minutes discussion)

**14:45-15:00** ES\_4 John Costello (substituting for Gerry O'Sullivan) *Summary of WG3 activities* (10 minutes + 5 minutes discussion)

**15:00-15:30** ES\_5 Alan Michette *General summary, including STSMs, publications, the final book, follow-on activities* (20 minutes + 10 minutes discussion)

### **Evaluation Session B**

#### 16:00-17:30

Attended by the MC members, the external Evaluators and the COST Office representatives.

Financial report from the COST Office, comments and questions from the DC Rapporteur and the external Evaluators, general discussion, future plans including final reporting requirements and deadlines.