2004 Source Modeling Workshop
November 4th, 2004
In-Person Workshop Held in Miyazaki, Japan

Workshop Proceedings

EUV
LITHO, INC.

Vivek Bakshi (EUV Litho, Inc), Chair

Katsunobu Nishihara (Osaka University), Co-Chair

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2:00 PM – 2:05 PM Welcome, Announcements, Introduction

**2:05 PM Session One: Fundamental Atomic Data and their Modeling
Chair: Takeshi Nishikawa (Okayama University)**

EUV emissions from charge-selected Xe ions using charge-transfer collisions in the ion-beam experiments (Which charge-states of Xe ions do contribute to the emission around 13.5 nm?)
Hajime Tanuma
Tokyo Metropolitan University

Wavelength and Width of Transition Arrays of Xe and Sn
Akira Sasaki
Advanced Photon Research Center

Sn Data for EUV Sources
Konstantin Koshelev
Sematech

**3:05 PM Session Two: LPP and GDPP Conversion Efficiency (CE) Modeling
Chair: Gerry O'Sullivan (University of Dublin)**

Conversion Efficiency of Laser-Produced Tin and Xenon Plasmas
Atsushi Sunahara
Institute for Laser Technology

Gas Discharge and Laser Produced Plasma Modeling and Simulation

Ahmed Hassanein
Purdue University

Source Modeling at Cymer

Curtis Rettig
Prism Computational Sciences

BREAK 3:45 PM – 4:15 PM

4:15 PM Session Three: Modeling of High Energy Ion and Debris

Fast Ions from LPP

Y-G. Kang
Institute of Laser Engineering

Debris Generation in Sn and Li Plasmas

David Ruzic
University of Illinois

4:45 PM Panel Discussions
Moderators: Vivek Bakshi and Katsunobu Nishihara

A. **What is the ultimate limit for CE for Xe and Sn based EUV Sources (GDPP/LPP)?**

Panelists:

A. Sunahara (Inst. Laser Tech.)

G. O'Sullivan (Dublin)

A. Hassanein (ANL)

M. Richardson (UCF)

S. V. Zakharov (EPPRA)

S. Fujioka (Osaka University)

B. What EUV source issues can be addressed by modeling?

C. What are the areas of deficiency for modeling infrastructure (Fundamental data, code development, etc.) and how to address them?

Panelists:

A. Sasaki (JAERI-APR)

A. Hassanein (ANL)

B. Rice (Intel)

C. Rettig (Cymer)

5:50 PM Workshop Highlights

2004 Source Modeling Workshop Adjourned

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