



2006 Symposium on Extreme Ultraviolet Lithography

closing remarks

- attendance update
- 2006 critical EUV issues
- poster awards
- THANKS !!!!!
- announcement EUVL 2007 Symposium



euvl Symposium
2006
Barcelona



closing remarks

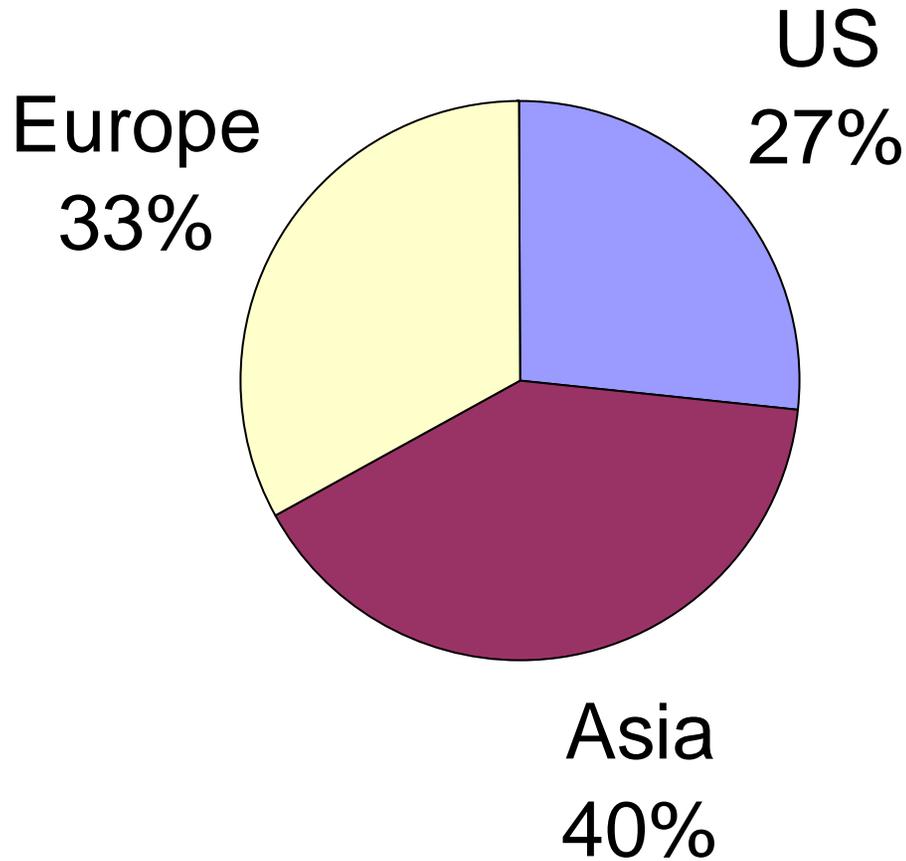
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euvl Symposium
2006
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Conference attendance...



... 368 registered attendees



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EUV Critical Issues List 2003-2005

2003	2004	2005
1. Source power and lifetime including condenser optics lifetime	1. Availability of defect free mask	1. Resist resolution, sensitivity & LER met simultaneously
2. Availability of defect free mask	2. Lifetime of source components & collector optics	2. Collector lifetime
3. Reticle protection during storage, handling and use	3. Resist resolution, sensitivity & LER met simultaneously	3. Availability of defect free mask
4. Projection and illuminator optics lifetime	<ul style="list-style-type: none"> ▪ Reticle protection during storage, handling and use 	4. Source power
5. Resist resolution, sensitivity and LER	<ul style="list-style-type: none"> ▪ Source power 	<ul style="list-style-type: none"> ▪ Reticle protection during storage, handling and use
6. Optics quality for 32-nm half-pitch node	<ul style="list-style-type: none"> ▪ Projection and illuminator optics lifetime 	<ul style="list-style-type: none"> ▪ Projection and illuminator optics quality & lifetime

2006 EUV Critical Issues Ranking

Critical Issue	Rank*
Reliable high power source & collector module	1.4
Resist resolution, sensitivity & LER met simultaneously	1.8
Availability of defect free masks	2.8
Reticle protection during storage, handling and use	4.3
Projection and illuminator optics quality and lifetime	4.5

Significant concern: Timing and cost / business case for EUVL development

*) Average of 24 steering committee member votes



EUV Critical Issues List 2003-2006

2003	2004	2005	2006
1. Source power and lifetime including condenser optics lifetime	1. Availability of defect free mask	1. Resist resolution, sensitivity & LER met simultaneously	1. Reliable high power source & collector module
2. Availability of defect free mask	2. Lifetime of source components & collector optics	2. Collector lifetime	2. Resist resolution, sensitivity & LER met simultaneously
3. Reticle protection during storage, handling and use	3. Resist resolution, sensitivity & LER met simultaneously	3. Availability of defect free mask	3. Availability of defect free mask
4. Projection and illuminator optics lifetime	<ul style="list-style-type: none"> Reticle protection during storage, handling and use 	4. Source power	4. Reticle protection during storage, handling and use
5. Resist resolution, sensitivity and LER	<ul style="list-style-type: none"> Source power 	<ul style="list-style-type: none"> Reticle protection during storage, handling and use 	5. Projection and illuminator optics quality & lifetime
6. Optics quality for 32-nm half-pitch node	<ul style="list-style-type: none"> Projection and illuminator optics lifetime 	<ul style="list-style-type: none"> Projection and illuminator optics quality & lifetime 	

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2006 International
Extreme Ultraviolet Lithography Symposium
15 – 18 October, 2006
World Trade Center, Barcelona, Spain



2nd place
Audience Award

The second place voted by the audience for best poster has been awarded to

*A.E. Yakshin¹, R.W.E. van de Kruijs¹, I. Nedelcu¹,
E. Zoethout¹, E. Louis¹, H. Enkisch², S. Müllender²
and F. Bijkerk¹
FOM¹, Carl Zeiss²*

for the poster titled

Interface Engineering of Mo/Si Multilayers for Enhanced Reflectance in EUVL Applications

We sincerely thank the authors for making a substantial contribution to the success of this Symposium.

Rob Hartman
Symposium Chair

Uwe Stamm
Program Chair



2006 International
Extreme Ultraviolet Lithography Symposium
15 – 18 October, 2006
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1st place
Audience Award

The first place voted by the audience for best poster
has been awarded to

Yuusuke Tanaka, Yukiko Kikuchi, DooHoon Goo, and Iwao
Nishiyama; ASET

for the poster titled

*Fidelity of Rectangular Patterns Printed with 0.3-NA MET
Optics*

We sincerely thank the authors for making a substantial
contribution to the success of this Symposium.

Rob Hartman
Symposium Chair

Uwe Stamm
Program Chair

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AGC
ASAHI GLASS COMPANY

ASET

ASML

Canon

ZEISS CARL ZEISS SMT

CYMER

DNP

Dai Nippon Printing

ENERGETIQ

EUV TECHNOLOGY

Media
Lario
Technologies

GIGAPHOTON

Lasertec

imec

EUVA

Nikon

powerlase

HOYA

Qimonda

SAMSUNG
ELECTRONICS

Selete

SEMATECH

TELTM

tok

TOPPAN

USHIO

XTREME
technologies

THANKS !!!!

- our sponsors
- reviewers, session chairs
- and in particular our staff:

US

Darlyne Harlan

Beth Kells

Connie Read

Mario Gonzalez

and in

the Netherlands

Maria Koens

Marcia Renders

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Dr. Horiike-san

2007 Symposium on Extreme Ultraviolet Lithography



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2007 International EUVL Symposium

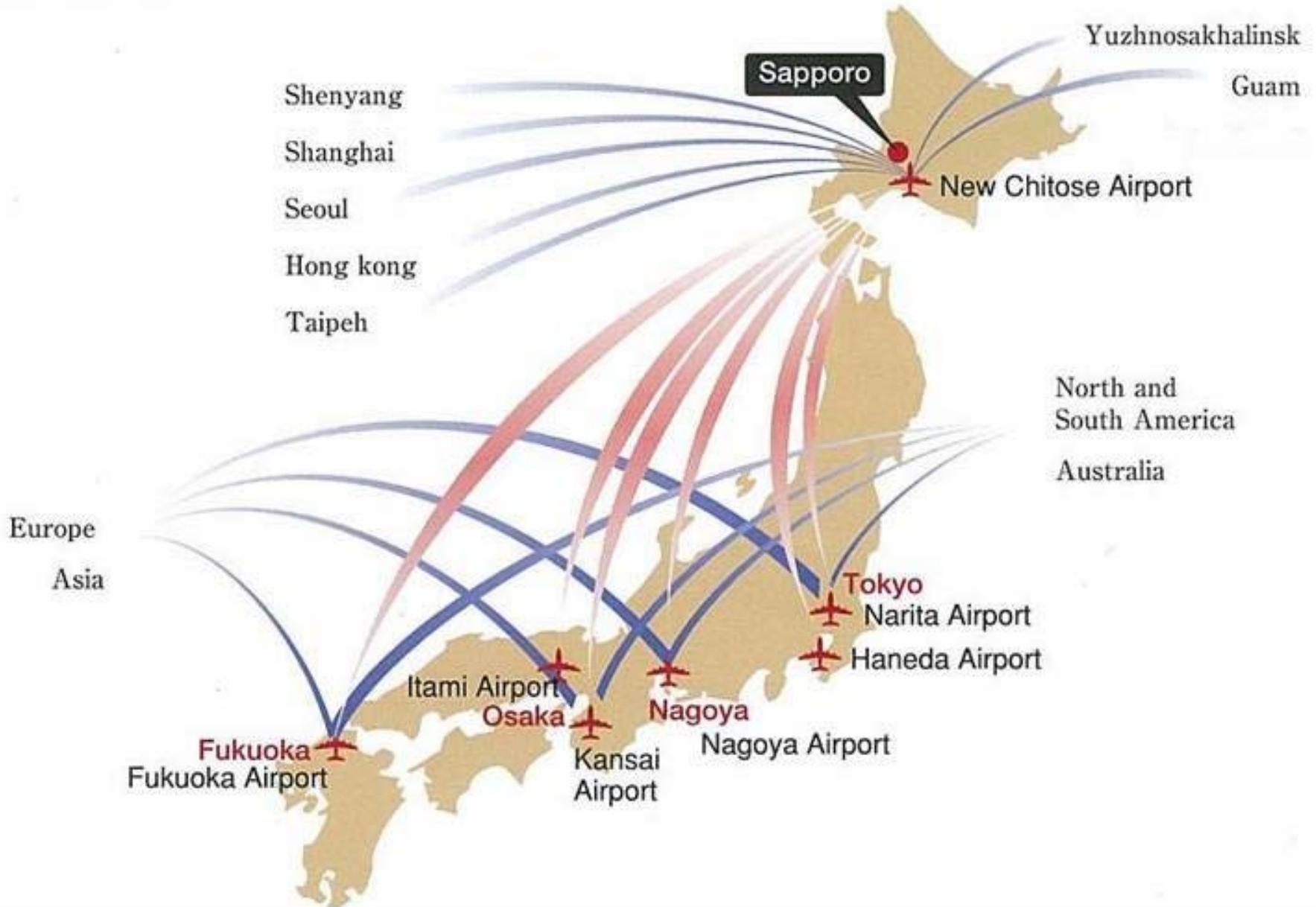
29-31 October 2007

In

Sapporo, Hokkaido
Japan



Access



Welcome to Sapporo



Oodori Park



Sapporo Clock Tower

"Treasure House" of Fresh Marine and Mountain Delicacies



EUVA office members enjoyed last march



Chiba

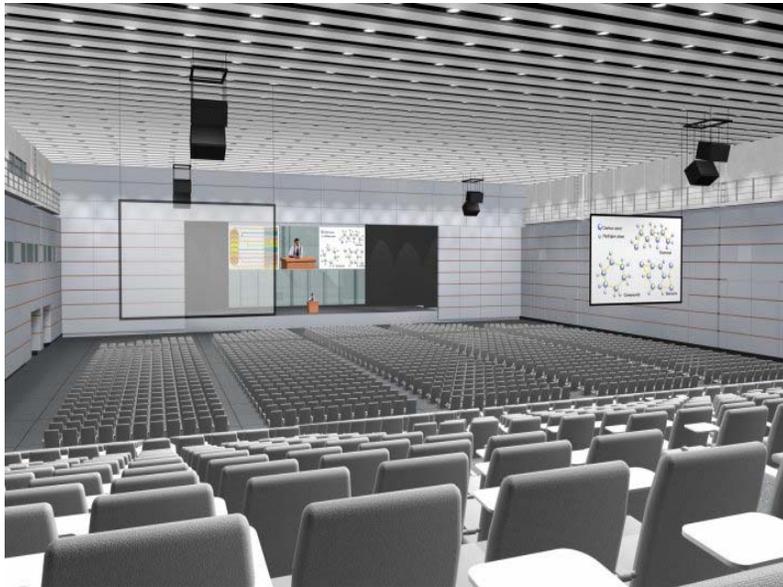
Abe

Tabuchi

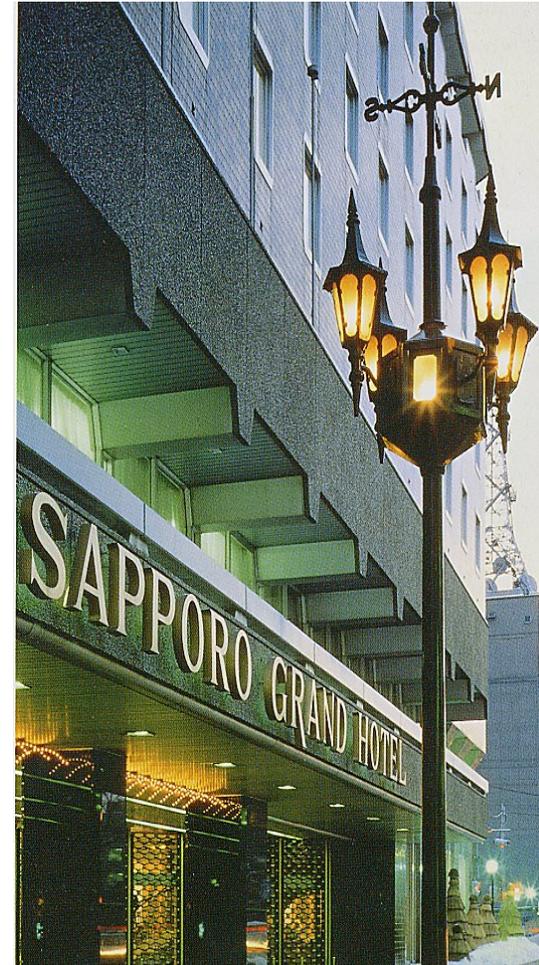
Ogawa

Sapporo Convention Center





Accommodations



RENAISSANCE HOTEL



2007 is a very crucial year!

**Nikon EUV1 will come following to
ASML Alpha-Demo tool**

**Various important decisions
will be made in 2007**

**Please submit your research
results to the next Symposium!**



Extreme Ultraviolet Lithography

Sapporo

Meeting

Conferences

29-31 October 2007



EXTREME ULTRAVIOLET LITHOGRAPHY

**2006 Symposium on
Extreme Ultraviolet Lithography
WTC, Barcelona, Spain**

16-18 October 2006

Conference Chair: Rob Hartman Program Chair: Uwe Stamm



























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