Photomask Japan 2022 Presentations: Day 1

As of April 19, 2022

Date (JST)	Session Time (JST UTC+9)	PDT UTC-7	CEST UTC+2	Session No.	Session Title	Program No.	Presentation Title	Name	Affiliation	Country
April 26, 2022	8:00-8:10	25-Apr 16:00 | 17:10	26-Apr 1:00 | 2:10		Opening					
	8:10-9:10			1	Opening Session: Day 1	1-1 (Keynote)	Innovations of Innovations In Photomasks	Jed H. Rankin	GlobalFoundries	United States
						1-2 (Invited)	ICAPS Market Trends and Key Inflections Driving Growth in the Semiconductor Equipment Segment	Shiva Rai	Applied Materials, Inc.	United States
	9:10-9:30				Break					
	9:30-10:10	17:30 | 18:10	2:30 | 3:10	2	EUV from U.S.	2-1	EUV Mask and Illumination Optimization for Low-k1 EUV Lithography	Dong-Seok Nam	ASML US, LP	United States
						2-2	Development of a Standalone Zoneplate based EUV Mask Defect Review Tool	Chami Perera	EUV Tech	United States
	10:10-10:30				Break					
	10:30-11:30	18:30 | 19:30	3:30 | 4:30	3	Special Session - EUV Mask Blanks -	3-1 (Invited)	EUV mask blanks review	Yoshiaki Ikuta	AGC Inc.	Japan
						3-2 (Invited)	Development of EUV blanks -- History and future challenge--	Takahiro Onoue	HOYA Corporation	Japan
	11:30-13:00				Lunch Break					
	13:00-14:30	21:00 | 22:30	6:00 | 7:30	4	NIL 1	4-1 (Invited)	The current status of nano-imprint lithography and its future outlook toward carbon neutrality by 2050	Tetsuro Nakasugi	Kioxia Corporation	Japan
						4-2	Nanoimprint Performance Improvements for High Volume Semiconductor Device Manufacturing	Kenichi Kobayashi	Canon Inc.	Japan
						4-3	Nanoimprint Edge Placement Error Elements and Control	Ryo Nawata	Canon Inc.	Japan
						4-4	Study of pattern quality improvement in replica template process	Ryo Kobayashi	Kioxia Corporation	Japan
	14:30-14:50				Break					
	14:50-16:10	22:50 | 26-Apr 0:10	7:50 | 9:10	5	NIL 2	5-1 (Invited)	Optical Metasurfaces for Advanced Imaging	Masashi Miyata	NTT Device Technology Laboratories	Japan
						5-2 (Invited)	Nanostructured Plasmonic Metasurface Gives a “Hand” to Chiral Self-Assembly	Hiromasa Niinomi	Tohoku University	Japan
						5-3	Development of Nano-Imprint Lithography Template for Fine Feature Hole Layers of Next Generation Devices	Koji Ichimura	Dai Nippon Printing Co., Ltd.	Japan
	16:10-16:30				Break					
	16:30-17:30	0:30 | 1:30	9:30 | 10:30	6	EUV for High NA	6-1 (Invited)	High-NA EUVL Exposure Tool: Program Progress and Mask Interaction	Jan van Schoot	ASML Netherlands B.V.	Netherlands
						6-2 (Invited)	EUV Optics in high volume manufacturing	Christian Karlewski	Carl Zeiss SMT GmbH	Germany
	17:30-17:50				Break					
	17:50-19:00	1:50 | 3:00	10:50 | 12:00	7	EUV Technologies	7-1 (Invited)	The EUV mask exposed	Vicky Philipsen	IMEC	Belgium
						7-2	Stand-alone EUV setups for photomask related inspection tasks	Sascha Brose	RWTH Aachen University	Germany
						7-3	EUV SRAFs Printing Modeling with Bright Field Mask	Chih-I Wei	Siemens Digital Industries Software	Belgium

Photomask Japan 2022 Presentations: Day 2

As of April 19, 2022

Date (JST)	Session Time (JST UTC+9)	PDT UTC-7	CEST UTC+2	Session No.	Session Title	Program No.	Presentation Title	Name	Affiliation	Country
April 27, 2022	**8:00-8:50**	26-Apr 16:00 - 16:50	27-Apr 1:00 - 1:50	**8**	**Opening Session: Day 2 - EDA -**	8-1 (Keynote)	New opportunities for mask data preparation during time of unprecedented advances in semiconductor technology and demand	Srinivas Raghvendra	Synopsys, Inc.	United States
						8-2	Checkpointing in EDA application for tapeout operation	Kuang Han Chen	Siemens Digital Industries Software	United States
	8:50-9:10				Break					
	9:10-10:40	17:10 - 18:40	2:10 - 3:40	**9**	**Curvilinear Data Handling**	9-1 (Invited)	Status of 'Curvilinear data format' working group	Jin Choi	Samsung Electronics Co Ltd.	Republic of Korea
						9-2	An Optimized Data Prep Flow for Curvilinear Masks	John Valadez	Synopsys, Inc.	United States
						9-3	Mask Modeling in the Curvilinear Mask Era	Alex Zepka	Synopsys, Inc.	United States
						9-4	Verification Methods for Curvilinear and Real-Curve Geometries	Kokoro Kato	Synopsys, Inc.	Japan
	10:40-11:00				Break					
	11:00-12:20	19:00 - 20:20	4:00 - 5:20	**10**	**Defect Control & Resolution**	10-1	Freeze point monitoring system for freeze cleaning method	Masaya Kamiya	Shibaura Mechatronics Corporation	Japan
						10-2	Advanced Reticle Carrier Solution	Chiaho Chuang	GUDENG PRECISION INDUSTRIAL CO., LTD.	Taiwan
						10-3	Massive Tiny MoSi Defect Reduction in NCAR Photoresist Blank	Joyce Wang	Photronics DNP Mask Corporation Xiamen	China
						10-4	Resist Pattern Resolution on Hard Mask Layer for Photomask	Naoto Yonemaru	Toppan Inc.	Japan
	12:20-13:20				Lunch Break					
	13:20-15:00	21:20 - 23:00	6:20 - 8:00	**11**	**Poster Session**	11-1	Full Field Wavefront error aware source and mask optimization for extreme ultraviolet lithography	PengZhi Wei	Beijing Institute of Technology	China
						11-2	Spectral evaluation of ionic debris in a laser-produced Sn plasma	Yuto Nakayama	Utsunomiya University	Japan
						11-3	EUV Pellicle Mechanical Stress Induced by Air Flow through The Pellicle Frame	Ching-Te Kuo	National Sun Yat-sen University	Taiwan
						11-4	High irradiance illuminator for transmission extreme ultraviolet microscopy	Shuntaro Waki	Tokyo Polytechnic University	Japan
						11-5	An Approach to Building Photomask CD SEM Recipe for HOLON ZX Using CATS	Konnanur Hariprasad	Synopsys, Inc.	United States
						11-6	Enhancement of the Proximity and Aerial Imaging Performance of a Software-based Data Path for Raster-scanned Multi-beam Laser Writer	Hsiang Jen YANG	TMC Inc.	Taiwan
						11-7	Application of Sub resolution assist features in 0.11um Process	Jian Zhang	Csmc Technologies Co., Ltd.	China
						11-8	Hydrogen Cleaning Evaluation of Mo/Si Multilayer using an EUV Irradiation Tool at NewSUBARU	Tetsuo Harada	University of Hyogo	Japan
						11-9	Development of Grazing-Incidence Coherent EUV Scatterometry Microscope for Resist Pattern Observation (2)	Naoya Kawakami	University of Hyogo	Japan
						11-10	The Application Of Mask Data Preparation On KLA DB Inspection	Fei-Lin Liu	Taiwan Mask Corporation	Taiwan
						11-11	High-precision EUV mask process development	Shingo Yoshikawa	Dai Nippon Printing Co., Ltd.	Japan
						11-12	Inline Model-base Mask Process Correction Embedded on Multi-beam Mask Writer MBM-2000	Noriaki Nakayamada	NuFlare Technology, Inc.	Japan
						11-13	Ecosystem Required for EUV Mask Curvilinear Pattern	Sukho Lee	Samsung Electronics Co Ltd.	Republic of Korea
	15:00-15:20				Break					

April 27, 2022	**15:20-17:20**	23:20 I 27-Apr 1:20	8:20 I 10:20		**Sponsor Session**		CyberOptics Corporation Introduction of Applications of In-line Particle Sensor IPS Mycronic Technologies Corporation Introduction of new semiconductor photomask laser writer SLX HORIBA, Ltd. Smart Metrology platform for pellicle inspection ADVANCED TECHNOLOGIES CO., LTD. Mask/Process tools in IntelliSuite for Physical Dry/Wet etching simulation and Process design TOOL Corporation To make your layout data tape-out ready			
	17:20-17:40				Break					
	17:40-19:10	1:40 I 3:10	10:40 I 12:10	**12**	**EUV Tools**	12-1 (Invited)	SEM Based Photo Mask Repair	Klaus Edinger	Carl Zeiss SMT GmbH	Germany
						12-2	Novel actinic solution and its application for EUV mask HVM	Byung Gook Kim	ESOL	Republic of Korea
						12-3	AIMS EUV Phase Metrology: ZEISS solution for the characterization of EUV phase shift masks	Renzo Capelli	Carl Zeiss SMT GmbH	Germany
						12-4	High-Precision and Cost-Effective EUV Reticle Defect Registration with Integrated Grid Matching using KLA LMS IPRO and FlashScan	Pavlo Portnichenko	KLA Corporation	Germany

Photomask Japan 2022 Presentations: Day 3

As of April 19, 2022

Date (JST)	Session Time (JST UTC+9)	PDT UTC-7	CEST UTC+2	Session No.	Session Title	Program No.	Presentation Title	Name	Affiliation	Country
April 28, 2022	8:00-9:20	27-Apr 16:00 I 17:20	28-Apr 1:00 I 2:20	13	Opening Session: Day 3 - EUV & Industry Trend -	13-1 (Keynote)	Advanced and Affordable EUV Lithography with Deep-Dive Mitigation of ML Defects	Yoshihiro Tezuka	Intel K.K.	Japan
						13-2	Diamond-Like-Carbon as Novel Capping Material for EUV Masks	Katrina Rook	Veeco Instruments	United States
						13-3 (Invited)	10th Annual eBeam Initiative Survey Reports Photomask Market Optimism	Aki Fujimura	D2S, Inc.	United States
	9:20-9:40				Break					
	9:40-11:10	17:40 I 19:10	2:40 I 4:10	14	Inspection & Metrology	14-1 (Invited)	Actinic patterned mask defect inspection for EUV lithography	Tsunehito Kohyama	Lasertec Corporation	Japan
						14-2	High-brightness LDP source for EUVL mask inspection	Kazuya Aoki	Ushio Inc.	Japan
						14-3	SEM-based VSB Writer Defects DL Classification System	Ajay Kumar Baranwal	Center for Deep Learning in Electronic Manufacturing, Inc.	United States
						14-4	Photomask pattern evaluation by massive measurement using Die-to-Database	Shinichi Nakazawa	TASMIT, Inc.	Japan
	11:10-11:30				Break					
	11:30-12:10	19:30 I 20:10	4:30 I 5:10	15	FPD	15-1	High-Transmission Phase Shift Mask Blank for High-Definition Flat Panel Display	Kento Hayashi	Nikon Corporation	Japan
						15-2	Flat Panel Display Technological Outlook and Required Techniques for Photomask Manufacturing	youngjin Park	Mycronic Co.,Ltd	Republic of Korea
	12:10-13:10				Lunch Break					
	13:10-14:30	21:10 I 22:30	6:10 I 7:30		Panel Discussion		- SDGs and Carbon Neutral inSemiconductor Manufacturing:what can PMJ do for the Earth? -	Prith Banerjee	ANSYS	United States
								Bartosz Straszak	Prodrive Technologies	Netherlands
								Robert Eklund	Mycronic AB	Sweden
								Koji Ichimura	Dai Nippon Printing Co., Ltd.	Japan
	14:30-14:50				Break					
	14:50-16:20	22:50 I 28-Apr 0:20	7:50 I 9:20	16	Metrology & MPC	16-1 (Invited)	Characterization of mask CD mean-to-target for hotspot patterns by using SEM image contours	Kan Zhou	Shanghai Huali Integrated Circuit Corporation	China
						16-2	Curvilinear EUV Mask: Development of Innovative Mask Metrology and OPC Model Calibration	Maxence Delorme	ASML Belgium	Belgium
						16-3	High-NA EUV Photoresist Metrology using High-Throughput Scanning Probe Microscopy	Marta San Juan Mucientes	Nearfield Instruments	Netherlands
						16-4	Simulation-based Verification for MPC corrected Mask Layouts	Nezih Unal	GenISys GmbH	Germany
	16:20-16:40				Break					
	16:40-18:10	0:40 I 2:20	9:40 I 11:20	17	Writing Tools	17-1 (Invited)	Multi-beam Mask Writer Technology Taking The Next Step	Mathias Tomandl	IMS Nanofabrication GmbH	Austria
						17-2	Multi-beam Mask Writer MBM-2000PLUS	Haruyuki Nomura	NuFlare Technology, Inc.	Japan
						17-3	Optimization of Laser Written Photomasks for Photonic Device Manufacturing	Markus Greul	Institut fur Mikroelektronik Stuttgart	Germany
						17-4	Laser Mask Writer addressable to 90nm nodes with Sustainability considered	Martin Glimtoft	Mycronic AB	Sweden
	18:10-18:20				Closing					