Photomask Japan 2019: Oral / Poster Presentations

Date	Session Time	Sesion No.	Session Title	Program No.	Presentation Title	Name	Affiliation	Country
Tuesday April 16 2019	9:00 - 9:10		Opening Remarks					
	9:10 - 10:10	1	Opening Session Day1	1-1 (Keynote)	FPGA Capability Expansion Despite Technology Challenges	Xin Wu	Xilinx Inc.	USA
				1-2 (Invited)	Packaging Technologies for Brain-inspired Devices in the era of AI/IoT	Yasumitsu Orii	NAGASE & CO., LTD.	Japan
	10:10 - 10:30		Break					
	10:30 - 11:50	2	Litho & Etching	2-1	Basic Design and Investigation of a Maskless Lithography System for Printing Patterns on the Inside Surface of a Long Pipe	Toshiyuki Horiuchi	Tokyo Denki University	Japan
				2-2	Improvement Study of Etching Resistance and Hydrophilicity of SOC Materials for Multilayer Lithography Process	Keisuke Kawashima	Mitsui Chemicals, Inc.	Japan
				2-3	Development of Plasma Etching Process Using Machine Learning	Takeshi Ohmori	Hitachi, Ltd.	Japan
				2-4	Rapid Thermal Cyclic ALE Process by Infrared Lamp and Plasma Source	Hiroyuki Kobayashi	Hitachi, Ltd.	Japan
	11:50 - 13:20		Lunch					
	13:20 - 14:30	3	FPD	3-1 (Invited)	Research on photomask process for FPD	Kouichi Murakami	FSCE Inc.	Japan
				3-2	Nikon's Large-size Cr/MoSi Att-PSM Blanks for Production of High Resolution Panels	Takashi Yagami	Nikon Corporation	Japan
				3-3	Applying 'Industry 4.0' methodologies to improve display mask shop operation	Anders Svensson	Mycronic AB	Sweden
	14:30 - 14:50		Break					
	14:50 - 16:10	4	Writing & Metrology	4-1 (Invited)	Progress report of MBMW-101 and introduction of the 2nd generation multi-beam mask writer	Elmar Platzgummer	IMS Nanofabrication GmbH	Austria
				4-2 (Invited)	*Best Paper Award Winner EMLC 2018* Fast Local Registration Measurements for Efficient e-Beam Writer Qualification and Correction	Klaus-Dieter Roeth	KLA Corporation	Germany
				4-3	Multi-beam mask writer MBM-1000	Hiroshi Matsumoto	NuFlare Technology, Inc.	Japan
	16:10 - 16:30		Break					
	16:30 - 18:00	5	EUVL I	5-1 (Invited)	High-NA EUV Lithography Exposure Tool: Program Progress and Mask Interaction	Jan van Schoot	ASML Netherlands B.V.	The Netheralands
				5-2	Imec update on EUV single patterning for logic metal layers	Ryoung-han kim	imec	Belgium
				5-3	Evaluation Of Local CD And Placement Distribution On EUV Mask And Its Impact On Wafer	Vidya Vaenkatesan	ASML Netherlands B.V	The Netheralands
				5-4	ASML NXE Pellicle Update	Derk Brouns	ASML BL	The Netheralands

Date	Session Time	Sesion No.	Session Title	Program No.	Presentation Title	Name	Affiliation	Country
Wednesday April 17 2019	09:00 - 10:30	6	Opening Session Day2	6-1 (Keynote)	Advanced Flash Memory Technology – Now and Future	Atsuyoshi Koike	Western Digital Corporation Western Digital Japan	Japan
				6-2 (Invited)	eBeam Initiative Surveys Report Growth in Photomasks Delivered and Continued Confidence in EUV Lithography	Aki Fujimura	D2S, Inc.	USA
				6-3 (Invited)	AI, IoT acceleration with Nonvolatile FPGA and High Level Synthesis ~The third computer~	Kazutoshi Wakabayashi	NEC Corporation	Japan
	10:30 - 10:50		Break					
	10:50 - 12:10	7	EDA & MDP	7-1	How GPU-Accelerated Simulation Enables Applied Deep Learning for Photomasks	Linyong (Leo) Pang	D2S, Inc.	USA
				7-2	Curvilinear Shapes: Challenges OPC and Mask Manufacturability	Youssef Drissi	imec	Belgium
				7-3	How curvilinear mask patterning will enhance the EUV process window: a study using rigorous wafer+mask dual simulation	Ryan Pearman	D2S, Inc.	USA
				7-4	MPC Model Sensitivity Analysis - Model Ambit vs. Correction Runtime	Alex Zepka	Synopsys, Inc.	USA
	12:10 - 13:40		Lunch					
	13:40 - 14:40	8	Special Session (MEMS & PUF)	8-1 (Invited)	Development of Massive Parallel Electron Beam Write System	Masayoshi Esashi	Tohoku University	Japan
				8-2 (Invited)	PUF (Physical Unclonable Functions) devices for IoT applications	Takeshi Fujino	Ritsumeikan University	Japan
	14:40 - 15:00		Break					
	15:00 - 16:50	9	EUVL II	9-1 (Invited)	Open Issues in Mask Technology as EUV Enters High Volume Manufacturing (HVM)	Moshe Preil	KLA Corporation	USA
				9-2	The study of relationship between defect sensitivity and inspectability on EUV masks with 19x nm mask inspection	Masashi Yonetani	Toppan Photomasks, Inc.	USA
				9-3	Recent Developments in At-wavelength EUV Metrology Tools for High Volume Manufacturing	Rupert Perera	EUV Tech Inc.	USA
				9-4	Solutions for actinic EUV stand-alone metrology tools based on available building blocks and experience	Jennifer Arps	RI Research Instruments GmbH	Germany
				9-5	Lifetime test on EUV photomask with EBL2	Chien-Ching Wu	TNO	The Netheralands

Date	Session Time	Sesion No.	Session Title	Program No.	Presentation Title	Name	Affiliation	Country
Wednesday April 17 2019	16:50 - 18:20	10A	Poster Session: Process & Material	10A-1	aquaSAVE Antistatic Agent for Electron Beam Lithography	Takahiro Mori	Mitsubishi Chemical Corporation Toyohashi R&D Center	Japan
				10A-2	A study of airborne molecular contamination to Cr etching process	Yuan Hsu	Photronics DNP Mask Corp.	Taiwan, R.O.C
		10B	Poster Session: EUVL Masks	10B-1	Low-stress and high-reflectance Mo/Si multilayers for EUVL by magnetron sputtering deposition with bias assistance	Hailiang Li	Institute of Microelectronics of Chinses Academy of Sciences	China
				10B-2	Development of the Breathable Frame for Closed EUV Pellicle	Akira Ishikawa	MITSUI CHEMICALS, INC.	Japan
				10B-3	EUV reflectometry and scatterometry on EUV masks and blanks: Three solution variants for suppliers, mask houses and fabs	Andreas Biermanns-Foeth	RI Research Instruments GmbH	Germany
				10B-4	Standalone EUV resist qualification and test tool with N7-compatible printing potential	Rainer Lebert	RI Research Instruments GmbH	Germany
				10B-5	Metrology tools and solutions for actinic EUV pellicle qualification	Rainer Lebert	RI Research Instruments GmbH	Germany
		10C	Poster Session: EDA&MDP	10C-1	Reduced TAT of Post Tape-out Flow on A Novel Platform	Xiang Fang	Mentor Graphics Corporation	Taiwan, R.O.C
				10C-2	Resolution and Writing Time Improvement by MBMDP Evaluation on Advanced node	SFANG,FENG WENG	United Microelectronics Corporation	Taiwan, R.O.C
				10C-3	Mask process correction for optical weak pattern improvement	Pai Chi Chen	United Microelectronics Corporation	Taiwan, R.O.C
		10D	Poster Session: Mask Overlay	10D-1	The impact of the reticle and wafer alignment mark placement accuracy on the intra-field mask-to-mask overlay	Richard van Haren	ASML Netherlands B.V	The Netheralands
		10E	Poster Session: Fab Management	10E-1	Balancing Access vs Security: The secureWISE Solution	John Abegglen	Telit	USA
		10S	Poster Session: Mask/ Lithography Related Technologies in Academia	10S-1	X-xay vortices with high topological charge generated by SFPs	Yonghao Liang	Institute of Microelectronics of Chinses Academy of Sciences	China
				10S-2	Investigation of Non-Charging Exposure Condition in Electron Beam Lithography	Kento Kubo	Osaka Institute of Technology	Japan
				10S-3	AFM Topographic Analyses of Positive-Tone EB Resist Lines Treated with Sequential Infiltration Synthesis and Solvent Annealing	Shunya Ito	Tohoku University	Japan
				10S-4	Data-Efficient Lithographic Resist Model Using Convolution Neural Networks.	Chun-Wei Hsu	National Chiao Tung University	Taiwan, R.O.C
				10S-5	Development of High-Power EUV Irradiation Tool in Hydrogen Atmosphere	Ayato Ohgata	University of Hyogo	Japan
				10S-6	Development of an EUV and OoB Reflectometer in NewSUBARU Synchrotron light Facility	Keisuke Tsuda	University of Hyogo	Japan
	18:20 - 20:20		Banquet					

Date	Session Time	Sesion No.	Session Title	Program No.	Presentation Title	Name	Affiliation	Country
Thursday April 18 2019	09:00 - 10:00	11	**Opening Session Day3**	11-1 (Invited)	Advanced Process and Material Technologies for EUV Lithography	Seiji Nagahara	Tokyo Electron Ltd.	Japan
				11-2 (Invited)	*Best Paper Award Winner BACUS 2018* Mask absorber development to enable next-generation EUVL	Vicky Philipsen	imec	Belgium
	10:00 - 10:20		**Break**					
	10:20 - 11:40	12	**EUVL Ⅲ**	12-1	Ion Beam Etch of Advanced Absorber Materials for EUV Masks	Katrina Rook	Veeco Instruments Inc.	USA
				12-2	EUV mask specifications - Future changes for consideration	John Zimmerman	ASML	USA
				12-3	Next Generation Functional Flatness Specifications for the High Volume Manufacturing of EUV Photomask Blanks	Katherine Ballman	Corning Tropel	USA
				12-4	Design of EUV Pods for defectivity and for pellicle use	Ty Chatchaidech	ASML	USA
	11:40 - 13:10		**Lunch**					
	13:10 - 15:00	13	**NIL**	13-1 (Invited)	NIL Preproduction Update and its Application for Advanced Memory with sub 15nm hp and Beyond	Tatsuhiko Higashiki	Toshiba Memory Corporation	Japan
				13-2	Status of Overlay Performance for NIL High Volume Manufacturing	Tatsuya Hayashi	Canon Inc.	Japan
				13-3	Advantages of Nanoimprint Lithography for Semiconductor Device Manufacturing	Toshiya Asano	Canon Inc.	Japan
				13-4	Fabrication of 1z nm template using Multi-Beam Mask Writer	Yasuhiro Okawa	Dai Nippon Printing Co., Ltd.	Japan
				13-5	Template Development for sub-15nm Nanoimprint Lithography	Ryouta Seki	Toshiba Memory Corp.	Japan
	15:00 - 15:20		**Break**					
	15:20 - 16:20	14	**CD & Defect control**	14-1	Deal gently with the bird you are trying to catch: small scale CD control with machine learning	Clemens Utzny	Advanced Mask Technology Center GmbH & Co. KG	Germany
				14-2	Understanding Etch Litho bias calibration dependency on measurement strategy of Photoresist features	Izak Kapilevich	Applied Materials	USA
				14-3	Advanced Laser Repair of EUV Photomasks	Tod Robinson	RAVE LLC	USA
	16:20 - 16:40		**Break**					
	16:40 - 18:20		**Panel Discussion**		Life goes on for trailing edge tools Please don't go away yet, industry still needs you!	(TBD)		
	18:20 - 18:30		**Closing Address**					