

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

LAM RESEARCH CORP.,

Petitioner,

v.

INPRIA CORP.,

Patent Owner.

Case No. IPR2024-00033

Patent No. 9,823,564

PETITIONER'S UPDATED EXHIBIT LIST

LIST OF EXHIBITS

Exhibit	Description	Previously Submitted
1001	U.S. Patent No. 9,823,564 (“’564 patent”)	X
1002	Expert Declaration of Karey Holland, Ph.D. (“Holland Declaration”)	X
1003	U.S. Patent Publication No. 2011/0293888 (“’888 publication”)	X
1004	U.S. Application No. 12/850,867 Prosecution History (“’867 application PH”)	X
1005	U.S. Application No. 61/350,103 (“’103 provisional”)	X
1006	Declaration Sylvia Hall-Ellis, Ph.D. Regarding Authenticity and Public Availability (“Hall-Ellis Declaration”)	X
1007	’564 Patent Prosecution History (“’564 patent PH”)	X
1008	Stowers, Jason K. <i>Direct patterning of solution deposited metal oxides</i> . Oregon State University, 2008 (“Stowers 2008”)	X
1009	U.S. Patent No. 10,782,610 Prosecution History (“’610 patent PH”)	X
1010	Stowers, Jason, and Douglas A. Keszler. <i>High resolution, high sensitivity inorganic resists</i> . Microelectronic Engineering 86.4-6 (2009): 730-733 (“Stowers 2009”)	X
1011	Complaint for <i>Inpria Corp. v. Lam Research Corp.</i> , 1-22-cv-01359	X
1012	Jouve, A., et al. <i>Overcoming pattern collapse of ultra high resolution dense lines obtained with EUV resists</i> . Advances in Resist Technology and Processing XXII. Vol. 5753. SPIE, 2005 (“Jouve”)	X
1013	Stowers, Jason, Alan Telecky, and Andrew Grenville. <i>Imageable oxides: new solutions for resist</i> . EUVL Symposium. 2010, available at https://euvsymposium.lbl.gov/pdf/2010/pres/RE-08.pdf	X

Exhibit	Description	Previously Submitted
1014	Telecky, Alan, et al. <i>Photopatternable inorganic hardmask</i> . Journal of Vacuum Science & Technology B 28.6 (2010): C6S19-C6S22 (“Telecky 2010”)	X
1015	Summons for <i>Inpria Corp. v. Lam Research Corp.</i> , 1-22-cv-01359	X
1016	Amador et al. <i>Patterning chemistry of HafSOx resist</i> . Advances in Patterning Materials and Processes XXXI. Vol. 9051. SPIE, 2014	X
1017	Reserved	X
1018	Decker, Shawn R. <i>On the Properties and Characteristics of Solution Processed Hafnium Based Thin-Films from Aqueous Precursors</i> . Oregon State University, 2017	X
1019	Oleksak et al. <i>Evaluation of Thermal and Radiation Induced Chemistries of Metal Oxo–Hydroxo Clusters for Next-Generation Nanoscale Inorganic Resists</i> . ACS Applied Nano Materials 1.9 (2018): 4548-4556	X
1020	Reserved	X
1021	U.S. Patent No. 7,773,365	X
1022	Stowers et al. <i>Directly patterned inorganic hardmask for EUV lithography</i> . Extreme Ultraviolet (EUV) Lithography II. Vol. 7969. SPIE, 2011 (“Stowers 2011”)	X
1023	Reserved	X
1024	Trikeriotis et al. <i>Development of an inorganic photoresist for DUV, EUV, and electron beam imaging</i> . Advances in Resist Materials and Processing Technology XXVII. Vol. 7639. SPIE, 2010 (“Trikeriotis”) (Library Version)	X
1025	Matsuzawa et al. <i>Theoretical estimation of absorption coefficients of various polymers at 13nm</i> . Journal of Photopolymer Science and Technology 12.4 (1999): 571-576.	X
1026	Puurunen et al. <i>Hafnium oxide films by atomic layer deposition for high-κ gate dielectric applications: Analysis of the density of nanometer-thin films</i> . Applied Physics Letters 86.7 (2005).	X

Exhibit	Description	Previously Submitted
1027	Ober and Giannelis. <i>New oxide nanoparticle extreme-UV photoresists achieve high sensitivity</i> . SPIE Newsroom (2014): 2-4.	X
1028	<i>Curriculum Vitae</i> of Sylvia D. Hall-Ellis, Ph.D.	X
1029	<i>Curriculum Vitae</i> of Karey L. Holland, Ph.D.	X
1030	Anderson, Jeremy T., et al. <i>Solution-processed HafSOx and ZircSOx inorganic thin-film dielectrics and nanolaminates</i> . Advanced Functional Materials 17.13 (2007): 2117-2124 (“Anderson”)	X
1031	Trikeriotis et al. <i>Development of an inorganic photoresist for DUV, EUV, and electron beam imaging</i> . Advances in Resist Materials and Processing Technology XXVII. Vol. 7639. SPIE, 2010 (“Trikeriotis”) (Electronic Version)	X
1032	Deposition Transcript of Jason Stowers, Ph.D. (October 11, 2024)	X
1033	Deposition Transcript of Sanjay K. Banerjee, Ph.D. (September 27, 2024)	X
1034	Oleksak RP & Herman GS, <i>Characterization of High-Resolution HafSOx Inorganic Resists</i> . Proc. SPIE 9048, Extreme Ultraviolet (EUV) Lithography V, 90483H (2014).	X
1035	Trakhtenberg S et al., <i>Non-Catalytic Photo-Induced Immobilization Process In Polymer Films, in Physico-Chemical Phenomena in Thin Films & At Solid Surfaces</i> (Trakhtenberg, L, Lin, S; Ilegbusi, eds. 2007)	X
1036	Krysak, Marie E., et al., <i>Investigation of Novel Inorganic Resist Material for EUV Lithography</i> . Proc. SPIE 9048, Extreme Ultraviolet (EUV) Lithography V, 904805 (2014) (“Krysak”)	X
1037	Brainard, Robert L, <i>Photoresists for EUV Lithography, in EUV Litogarphy</i> (Bakshi, V. Ed. 2018)	X
1038	International Application Publication No. WO2008/082448 (“Keszler”)	X

Exhibit	Description	Previously Submitted
1039	R. Chang & K Goldsby, <i>Chemistry</i> (11th ed. 2013) (excerpts).	X
1040	Expert Declaration of Karey Holland, Ph.D.	X
1041	Declaration of Heather Stewart	X
1042	Email from Brad Engelbert, Cataloging & Government Documents Manager of Oregon State University, to Risa L. Murphy, Morgan, Lewis & Bockius (August 13, 2024)	X
1043	Declaration of Patrick Franzen	X
1044	Fallica et al., <i>Absorption Coefficient of Metal-Containing Photoresists in the Extreme Ultraviolet</i> , J Micro/Nanolith. MEMS MOEMS 17(2), 023505 (2018)	X
1045	Reserved	X
1046	Kirchauer, Heinrich, <i>Photolithography Simulation</i> , Vienna University of Technology, 1998 (available at https://www.iue.tuwien.ac.at/phd/kirchauer/diss.html) (excerpt)	X
1047	Schnabel, Wolfram, <i>Polymers & Electromagnetic Radiation: Fundamentals & Practical Applications</i> (2014).	X
1048	Petitioner's Demonstratives	

CERTIFICATE OF SERVICE

Pursuant to 37 C.F.R. § 42.6(e)(4), it is hereby certified that on January 27, 2025 an electronic copy of this PETITIONER'S UPDATED EXHIBIT LIST, and EXHIBIT 1048 was served via email to Patent Owner's counsel of record in this proceeding:

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