

John S Petersen

List of Publications by Year in descending order

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Version: 2024-02-01

53
papers

366
citations

1684188

5
h-index

1720034

7
g-index

53
all docs

53
docs citations

53
times ranked

139
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|---|-----|-----------|
| 1 | 2-Colour photolithography. Physical Chemistry Chemical Physics, 2014, 16, 8731. | 2.8 | 35 |
| 2 | <title>Nonconstant diffusion coefficients: short description of modeling and comparison to experimental results</title>. , 1995, , . | | 29 |
| 3 | Modeling the impact of thermal history during post-exposure bake on the lithographic performance of chemically amplified resists. , 2001, , . | | 24 |
| 4 | <title>Characterization and modeling of a positive-acting chemically amplified resist</title>. , 1995, , . | | 21 |
| 5 | Interference assisted lithography for patterning of 1D gridded design. Proceedings of SPIE, 2009, , . | 0.8 | 18 |
| 6 | Assessment of a hypothetical roadmap that extends optical lithography through the 70-nm technology node. , 1998, , . | | 15 |
| 7 | Phase thirst! An improved strong-PSM paradigm. , 2001, , . | | 15 |
| 8 | Design and analysis of manufacturable alternating phase-shifting masks. , 1998, , . | | 14 |
| 9 | Analytical description of antiscattering and scattering bar assist features. , 2000, 4000, 77. | | 14 |
| 10 | The formation of acid diffusion wells in acid catalyzed photoresists. Microelectronic Engineering, 1997, 35, 169-174. | 2.4 | 13 |
| 11 | Binary halftone chromeless PSM technology for $\lambda/4$ optical lithography. , 2001, , . | | 12 |
| 12 | Elucidating complex triplet-state dynamics in the model system isopropylthioxanthone. Science, 2022, 25, 103600. | 4.1 | 12 |
| 13 | Examination of isolated and grouped feature bias in positive-acting chemically amplified resist systems. , 1996, , . | | 11 |
| 14 | Multiple pitch transmission and phase analysis of six types of strong phase-shifting masks. , 2001, , . | | 11 |
| 15 | Writing wavy metal 1 shapes on 22-nm logic wafers with less shot count. Proceedings of SPIE, 2010, , . | 0.8 | 11 |
| 16 | Process development for 180-nm structures using interferometric lithography and i-line photoresist. , 1997, , . | | 10 |
| 17 | Design of 200-nm, 170-nm, and 140-nm DUV contact sweeper high-transmission attenuating phase-shift mask through simulation I. , 1998, , . | | 10 |
| 18 | Complex 2D pattern lithography at $\lambda/4$ resolution using chromeless phase lithography (CPL). , 2002, 4691, 196. | | 10 |

| # | ARTICLE | IF | CITATIONS |
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| 19 | Illumination pupil filtering using modified quadrupole apertures. , 1998, , . | | 9 |
| 20 | Resolution enhancement with high-transmission attenuating phase-shift masks. , 1999, , . | | 8 |
| 21 | High-transmission attenuated PSM: benefits and limitations through a validation study of 33%, 20%, and 6% transmission masks. , 2000, 4000, 1163. | | 8 |
| 22 | Influences of off-axis illumination on optical lens aberration. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 1998, 16, 3405. | 1.6 | 5 |
| 23 | Designing dual-trench alternating phase-shift masks for 140-nm and smaller features using 248-nm KrF and 193-nm ArF lithography. , 1998, 3412, 503. | | 5 |
| 24 | Imaging contrast improvement for 160-nm line features using subresolution assist features with binary, six percent ternary attenuated phase-shift mask with process-tuned resist. , 1999, 3679, 55. | | 5 |
| 25 | Optical proximity strategies for desensitizing lens aberrations. , 2001, , . | | 4 |
| 26 | An integrated imaging system for the 45-nm technology node contact holes using polarized OAI, immersion, weak PSM, and negative resists. , 2005, 5754, 488. | | 4 |
| 27 | Advanced FTIR techniques for photoresist process characterization. , 1997, , . | | 3 |
| 28 | Design of 200-nm, 170-nm, and 140-nm DUV contact sweeper high-transmission attenuating phase-shift mask: II. Experimental results. , 1999, , . | | 3 |
| 29 | Aberration evaluation and tolerancing of 193-nm lithographic objective lenses. , 1998, 3334, 269. | | 2 |
| 30 | Optical extension at the 193-nm wavelength. , 1999, , . | | 2 |
| 31 | Development of a sub-100-nm integrated imaging system using chromeless phase-shifting imaging with very high NA KrF exposure and off-axis illumination. , 2002, , . | | 2 |
| 32 | Imaging 100 nm contacts with high transmission attenuated phase shift masks. , 2002, 4889, 1242. | | 2 |
| 33 | <title>Developing an integrated imaging system for the 70-nm node using high numerical aperture ArF lithography</title>. , 2002, , . | | 2 |
| 34 | Programmable lithography engine (ProLE) grid-type supercomputer and its applications. , 2003, , . | | 2 |
| 35 | Resist requirements in the era of resolution enhancement techniques. , 2003, 5039, 15. | | 2 |
| 36 | Unraveling the role of photons and electrons upon their chemical interaction with photoresist during EUV exposure. , 2018, , . | | 2 |

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| 37 | Unraveling the EUV photoresist reactions: which, how much, and how do they relate to printing performance. , 2019, , . | | 2 |
| 38 | EUV resist chemical gradient enhancement by UV flood exposure for improvement in EUV resist resolution, process control, roughness, sensitivity and stochastic defectivity. , 2020, , . | | 2 |
| 39 | Submicron imaging at 248.3nm: A lithographic performance review and initial process performance screening of Megaposit SNR 248-1.0 photo resist.. Journal of Photopolymer Science and Technology = [Fotoporima Konwakai Shi], 1990, 3, 305-317. | 0.3 | 1 |
| 40 | Optimization of 300-mm coat, exposure, and develop processes for 180-nm and smaller features. , 1999, 3678, 947. | | 1 |
| 41 | Resolution and DOF improvement through the use of square-shaped illumination. , 1999, 3679, 408. | | 1 |
| 42 | Evaluation of SCAA mask technology as a pathway to the 65-nm node. , 2003, , . | | 1 |
| 43 | The state of the art in multicolor visible photolithography. , 2018, , . | | 1 |
| 44 | Benchmarking 3-color photoresists for multiphoton absorption lithography. , 2018, , . | | 1 |
| 45 | Calibrated PSCAR stochastic simulation. , 2019, , . | | 1 |
| 46 | Effect of phase error on 180-nm and 250-nm grouped-line KrF lithography using an alternating phase-shift mask. , 1997, 3096, 375. | | 0 |
| 47 | <title>Assessment of a hypothetical road map that extends optical lithography through the 70-nm technology node</title>. , 1999, 3741, 73. | | 0 |
| 48 | <title>Development of a sub-100nm integrated imaging system using chromeless phase-shifting imaging with very high NA KrF exposure and off-axis illumination</title>. , 2002, 4692, 298. | | 0 |
| 49 | Imaging study of positive and negative tone weak phase-shifted 65 nm node contacts. , 2005, , . | | 0 |
| 50 | Thin films for high-resolution, 3-color lithography. , 2018, , . | | 0 |
| 51 | Constructing a robust PSCARTM process for EUV (Conference Presentation). , 2018, , . | | 0 |
| 52 | Oxygen effects in thin films for high-resolution , 3-color lithography. , 2019, , . | | 0 |
| 53 | PSCAR optimization to reduce EUV resist roughness with sensitization using Resist Formulation Optimizer (RFO) (Conference Presentation). , 2019, , . | | 0 |