

Eric A Joseph

List of Publications by Year in descending order

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43
papers

965
citations

516710

16
h-index

434195

31
g-index

43
all docs

43
docs citations

43
times ranked

1115
citing authors

#	ARTICLE	IF	CITATIONS
1	Fluorocarbon assisted atomic layer etching of SiO ₂ using cyclic Ar/C ₄ F ₈ plasma. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2014, 32, .	2.1	161
2	Two-Dimensional Pattern Formation Using Graphoepitaxy of PS- <i>b</i> -PMMA Block Copolymers for Advanced FinFET Device and Circuit Fabrication. ACS Nano, 2014, 8, 5227-5232.	14.6	143
3	Fluorocarbon assisted atomic layer etching of SiO ₂ and Si using cyclic Ar/C ₄ F ₈ and Ar/CHF ₃ plasma. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2016, 34, .	2.1	74
4	Fabrication of sub-20 nm nanopore arrays in membranes with embedded metal electrodes at wafer scales. Nanoscale, 2014, 6, 8900-8906.	5.6	57
5	MIEC (mixed-ionic-electronic-conduction)-based access devices for non-volatile crossbar memory arrays. Semiconductor Science and Technology, 2014, 29, 104005.	2.0	45
6	Challenges of Tailoring Surface Chemistry and Plasma/Surface Interactions to Advance Atomic Layer Etching. ECS Journal of Solid State Science and Technology, 2015, 4, N5054-N5060.	1.8	45
7	Integrated on-chip inductors with electroplated magnetic yokes (invited). Journal of Applied Physics, 2012, 111, .	2.5	43
8	Wafer-scale integration of sacrificial nanofluidic chips for detecting and manipulating single DNA molecules. Nature Communications, 2017, 8, 14243.	12.8	40
9	Achieving ultrahigh etching selectivity of SiO ₂ over Si ₃ N ₄ and Si in atomic layer etching by exploiting chemistry of complex hydrofluorocarbon precursors. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2018, 36, .	2.1	40
10	Characterizing fluorocarbon assisted atomic layer etching of Si using cyclic Ar/C ₄ F ₈ and Ar/CHF ₃ plasma. Journal of Chemical Physics, 2017, 146, 052801.	3.0	35
11	Electron beam generated plasmas: Characteristics and etching of silicon nitride. Microelectronic Engineering, 2017, 168, 89-96.	2.4	24
12	Modified gaseous electronics conference reference cell for the study of plasma-surface-gas interactions. Review of Scientific Instruments, 2004, 75, 884-890.	1.3	22
13	Dynamic Resistance—A Metric for Variability Characterization of Phase-Change Memory. IEEE Electron Device Letters, 2009, 30, 126-129.	3.9	22
14	Effect of surface temperature on plasma-surface interactions in an inductively coupled modified gaseous electronics conference reactor. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2005, 23, 1657-1667.	2.1	21
15	Initial evaluation and comparison of plasma damage to atomic layer carbon materials using conventional and low <i>T_e</i> plasma sources. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2016, 34, .	2.1	18
16	Application of cyclic fluorocarbon/argon discharges to device patterning. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2016, 34, .	2.1	17
17	Nitride etching with hydrofluorocarbons. I. Selective etching of nitride over silicon and oxide materials by gas discharge optimization and selective deposition of fluorocarbon polymer. Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics, 2017, 35, .	1.2	17
18	High chi block copolymer DSA to improve pattern quality for FinFET device fabrication. Proceedings of SPIE, 2016, , .	0.8	16

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19	Selective atomic layer etching of HfO ₂ over silicon by precursor and substrate-dependent selective deposition. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2020, 38, .	2.1	16
20	Spectroscopic study of gas and surface phase chemistries of CF ₄ plasmas in an inductively coupled modified gaseous electronics conference reactor. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2006, 24, 114-125.	2.1	15
21	Nitride etching with hydrofluorocarbons III: Comparison of C ₄ H ₉ F and CH ₃ F for low-k ² nitride spacer etch processes. Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics, 2018, 36, .	1.2	12
22	Nitride etching with hydrofluorocarbons. II. Evaluation of C ₄ H ₉ F for tight pitch Si ₃ N ₄ patterning applications. Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics, 2018, 36, 031801.	1.2	10
23	Design and fabrication of a multiple-thickness electrochemical cantilever sensor. Microelectronic Engineering, 2014, 119, 1-5.	2.4	9
24	Pattern transfer of directed self-assembly patterns for CMOS device applications. Journal of Micro/ Nanolithography, MEMS, and MOEMS, 2013, 12, 041305.	0.9	8
25	Highly selective dry etching of polystyrene-poly(methyl methacrylate) block copolymer by gas pulsing carbon monoxide-based plasmas. Journal Physics D: Applied Physics, 2017, 50, 204001.	2.8	8
26	The impact of melting during reset operation on the reliability of phase change memory. , 2012, , .		7
27	CMOS-Compatible Self-Aligned In _{0.53} Ga _{0.47} As MOSFETs With Gate Lengths Down to 30 nm. IEEE Transactions on Electron Devices, 2014, 61, 3399-3404.	3.0	7
28	Cyclic Cl ₂ /H ₂ quasi-atomic layer etching approach for TiN and TaN patterning using organic masks. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2017, 35, .	2.1	7
29	Pattern transfer of directed self-assembly (DSA) patterns for CMOS device applications. , 2013, , .		5
30	Significance of plasma-photoresist interactions for atomic layer etching processes with extreme ultraviolet photoresist. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2020, 38, .	2.1	4
31	Low-k spacers for advanced low power CMOS devices with reduced parasitic capacitances. , 2008, , .		3
32	The Influence of Nitrogen Doping on the Chemical and Local Bonding Environment of Amorphous and Crystalline Ge ₂ Sb ₂ Te ₅ . Materials Research Society Symposia Proceedings, 2009, 1160, 1.	0.1	3
33	Generation of local magnetic fields at megahertz rates for the study of domain wall propagation in magnetic nanowires. Applied Physics Letters, 2009, 95, 262503.	3.3	2
34	Influence of Bottom Contact Material on the Selective Chemical Vapor Deposition of Crystalline GeSbTe Alloys. Materials Research Society Symposia Proceedings, 2010, 1251, 10.	0.1	2
35	Subtractive W contact and local interconnect co-integration (CLIC). , 2013, , .		2
36	Self-aligned line-space pattern customization with directed self-assembly graphoepitaxy at 24nm pitch. Proceedings of SPIE, 2015, , .	0.8	2

#	ARTICLE	IF	CITATIONS
37	Fabrication of dual damascene BEOL structures using a multilevel multiple exposure (MLME) scheme, part 2: RIE-based pattern transfer and completion of dual damascene process yielding an electrically functional via chain. Proceedings of SPIE, 2010, , .	0.8	1
38	Moving from thin films to atomic layers — Atomic layer etching. , 2015, , .		1
39	Applications for Surface Engineering Using Atomic Layer Etching - Invited Paper. Solid State Phenomena, 2016, 255, 41-48.	0.3	1
40	Fabrication of dual damascene BEOL structures using a multilevel multiple exposure (MLME) scheme, part 1: lithographic patterning. , 2010, , .		0
41	Electrical characterization of FinFETs with fins formed by directed self assembly at 29 nm fin pitch using a self-aligned fin customization scheme. , 2014, , .		0
42	Defect mitigation of plasma-induced delamination of TiW/Cu from SiN<inf>x</inf> layer in thin si interposer processing with glass carriers. , 2015, , .		0
43	Preface for the Festschrift Honoring Dr. Steve Rossnagel. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2020, 38, .	2.1	0