Silvia Armini

List of Publications by Year
in descending order

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74 papers	1,429 citations	331538 21 h-index	377752 34 g-index
74 all docs	74 docs citations	74 times ranked	1369 citing authors

#	ARTICLE	IF	CITATIONS
1	Vapor-deposited zeolitic imidazolate frameworks as gap-filling ultra-low-k dielectrics. Nature Communications, 2019, 10, 3729.	5.8	106
2	Composite Polymer Coreâ€“Ceria Shell Abrasive Particles during Oxide CMP: A Defectivity Study. Journal of the Electrochemical Society, 2008, 155, H653.	1.3	77
3	Copper plating for 3D interconnects. Microelectronic Engineering, 2011, 88, 701-704.	1.1	77
4	Integration challenges of copper Through Silicon Via (TSV) metallization for 3D-stacked IC integration. Microelectronic Engineering, 2011, 88, 745-748.	1.1	66
5	Prediction of scratch generation in chemical mechanical planarization. CIRP Annals - Manufacturing Technology, 2008, 57, 559-562.	1.7	65
6	Nanoscale Indentation of Polymer and Composite Polymerâˆ’Silica Coreâˆ’Shell Submicrometer Particles by Atomic Force Microscopy. Langmuir, 2007, 23, 2007-2014.	1.6	57
7	Capturing Wetting States in Nanopatterned Silicon. ACS Nano, 2014, 8, 885-893.	7.3	55
8	Composite Polymer-Core Silica-Shell Abrasive Particles during Oxide CMP. Journal of the Electrochemical Society, 2007, 154, H667.	1.3	53
9	Bottomâ€Up Engineering of Subnanometer Copper Diffusion Barriers Using NH₂â€Derived Selfâ€Assembled Monolayers. Advanced Functional Materials, 2010, 20, 1125-1131.	7.8	53
10	Selective Ru ALD as a Catalyst for Sub-Seven-Nanometer Bottom-Up Metal Interconnects. ACS Applied Materials & Interfaces, 2017, 9, 31031-31041.	4.0	47
11	Vapor-deposited octadecanethiol masking layer on copper to enable area selective Hf3N4 atomic layer deposition on dielectrics studied by in situ spectroscopic ellipsometry. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2018, 36, 031605.	0.9	44
12	Electroless Cu deposition on atomic layer deposited Ru as novel seed formation process in through-Si vias. Electrochimica Acta, 2013, 100, 203-211.	2.6	42
13	Copper CMP with Composite Polymer Coreâ€“Silica Shell Abrasives: A Defectivity Study. Journal of the Electrochemical Society, 2009, 156, H18.	1.3	34
14	Impact of Plasma Pretreatment and Pore Size on the Sealing of Ultra-Low-<i>k</i> Dielectrics by Self-Assembled Monolayers. Langmuir, 2014, 30, 3832-3844.	1.6	28
15	On the use of (3-trimethoxysilylpropyl)diethylenetriamine self-assembled monolayers as seed layers for the growth of Mn based copper diffusion barrier layers. Applied Surface Science, 2018, 427, 260-266.	3.1	26
16	Area-Selective ALD of Ru on Nanometer-Scale Cu Lines through Dimerization of Amino-Functionalized Alkoxy Silane Passivation Films. ACS Applied Materials & Interfaces, 2020, 12, 4678-4688.	4.0	25
17	Composite Polymer Coreâ€“Silica Shell Abrasives: The Effect of the Shape of the Silica Particles on Oxide CMP. Journal of the Electrochemical Society, 2008, 155, H401.	1.3	24
18	Pore sealing of k 2.0 dielectrics assisted by self-assembled monolayers deposited from vapor phase. Microelectronic Engineering, 2014, 120, 240-245.	1.1	24

#	Article	IF	Citations
19	Pore Sealing of Porous Ultralow-k Dielectrics by Self-Assembled Monolayers Combined with Atomic Layer Deposition. ECS Solid State Letters, 2012, 1, P42-P44.	1.4	23
20	Impact of â€œterminal effectâ€•on Cu electrochemical deposition: Filling capability for different metallization options. Microelectronic Engineering, 2011, 88, 754-759.	1.1	22
21	Electroless Copper Bath Stability Monitoring with UV-VIS Spectroscopy, pH, and Mixed Potential Measurements. Journal of the Electrochemical Society, 2012, 159, D437-D441.	1.3	22
22	Surface sealing using self-assembled monolayers and its effect on metal diffusion in porous low- k dielectrics studied using monoenergetic positron beams. Applied Surface Science, 2016, 368, 272-276.	3.1	22
23	Selective electroless deposition of cobalt using amino-terminated SAMs. Journal of Materials Chemistry C, 2019, 7, 4392-4402.	2.7	21
24	Cu Electrodeposition on Resistive Substrates in Alkaline Chemistry: Effect of Current Density and Wafer RPM. Journal of the Electrochemical Society, 2011, 158, D390.	1.3	20
25	Sacrificial Self-Assembled Monolayers for the Passivation of GaAs (100) Surfaces and Interfaces. Chemistry of Materials, 2016, 28, 5689-5701.	3.2	20
26	Nucleation and adhesion of ultra-thin copper films on amino-terminated self-assembled monolayers. Applied Surface Science, 2018, 462, 38-47.	3.1	18
27	Engineering Polymer Coreâ€“Silica Shell Size in the Composite Abrasives for CMP Applications. Electrochemical and Solid-State Letters, 2008, 11, H280.	2.2	17
28	Direct Copper Electrochemical Deposition on Ru-Based Substrates for Advanced Interconnects Target 30 nm and Â½ Pitch Lines: From Coupon to Full-Wafer Experiments. Journal of the Electrochemical Society, 2013, 160, D89-D94.	1.3	15
29	Partial Wetting of Aqueous Solutions on High Aspect Ratio Nanopillars with Hydrophilic Surface Finish. ECS Journal of Solid State Science and Technology, 2014, 3, N3095-N3100.	0.9	14
30	Nucleation Kinetics of Electroless Cu Deposition on Ruthenium Using Glyoxylic Acid as a Reducing Agent. Journal of the Electrochemical Society, 2014, 161, D768-D774.	1.3	14
31	Size Shrinkage of Methacrylate-based Terpolymer Latexes Synthesized by Free Radical Polymerization: Kinetics and Influence of Main Reaction Parameters. Polymer Journal, 2006, 38, 786-798.	1.3	13
32	Composite Polymer Coreâ€“Silica Shell Abrasives. Electrochemical and Solid-State Letters, 2007, 10, H243.	2.2	13
33	Interaction Forces Between a Glass Surface and Ceria-Modified PMMA-Based Abrasives for CMP Measured by Colloidal Probe AFM. Journal of the Electrochemical Society, 2008, 155, H218.	1.3	11
34	Surface-confined activation of ultra low-k dielectrics in CO2 plasma. Applied Physics Letters, 2016, 108, .	1.5	11
35	Understanding the impact of Cu surface pre-treatment on Octadecanethiol-derived self-assembled monolayer as a mask for area-selective deposition. Applied Surface Science, 2021, 540, 148307.	3.1	11
36	Interaction Forces Between a Glass Surface and Silica-Modified PMMA-Based Abrasives for CMP Measured by Colloidal AFM. Electrochemical and Solid-State Letters, 2007, 10, H74.	2.2	10

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37	Controlling Scratching in Cu Chemical Mechanical Planarization. Journal of the Electrochemical Society, 2009, 156, H528.	1.3	10
38	Self-focusing SIMS: A metrology solution to area selective deposition. Applied Surface Science, 2019, 476, 594-599.	3.1	10
39	Evaluation of Metallization Options for Advanced Cu Interconnects Application. ECS Transactions, 2011, 34, 515-521.	0.3	9
40	Selective self-assembled monolayer coating to enable Cu-to-Cu connection in dual damascene vias. Microelectronic Engineering, 2013, 106, 76-80.	1.1	9
41	High sensitivity Rutherford backscattering spectrometry using multidetector digital pulse processing. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2018, 36, 02D407.	0.9	9
42	Rethinking surface reactions in nanoscale dry processes toward atomic precision and beyond: a physics and chemistry perspective. Japanese Journal of Applied Physics, 2019, 58, SE0801.	0.8	9
43	Area selective grafting of siloxane molecules on low-k dielectric with respect to copper surface. Applied Surface Science, 2019, 476, 317-324.	3.1	9
44	Understanding Selectivity Loss Mechanisms in Selective Material Deposition by Area Deactivation on 10 nm Cu/SiO₂ Patterns. ACS Applied Electronic Materials, 2022, 4, 1703-1714.	2.0	9
45	Application of Self-Assembled Monolayers to the Electroless Metallization of High Aspect Ratio Vias for Microelectronics. Journal of Electronic Materials, 2016, 45, 5449-5455.	1.0	8
46	UV cure of oxycarbosilane low-k films. Microelectronic Engineering, 2016, 156, 103-107.	1.1	8
47	Cyclic Plasma Halogenation of Amorphous Carbon for Defect-Free Area-Selective Atomic Layer Deposition of Titanium Oxide. ACS Applied Materials & Interfaces, 2021, 13, 32381-32392.	4.0	8
48	Determination of the Binding of Non-Cross-Linked and Cross-Linked Gels to Living Cells by Atomic Force Microscopy. Langmuir, 2009, 25, 6977-6984.	1.6	7
49	Numerical analysis of zeptogram/Hz-level mass responsivity for in-plane resonant nano-electro-mechanical sensors. Microelectronic Engineering, 2011, 88, 2879-2884.	1.1	7
50	Electrical properties of amino SAM layers studied with conductive AFM. European Polymer Journal, 2013, 49, 1952-1956.	2.6	7
51	The Effects of Plasma Treatments and Subsequent Atomic Layer Deposition on the Pore Structure of a k = 2.0 Low-k Material. ECS Journal of Solid State Science and Technology, 2013, 2, N103-N109.	0.9	7
52	Stuffing-enabled surface confinement of silanes used as sealing agents on CF4 plasma-exposed 2.0 p-OSG films. Microelectronic Engineering, 2015, 137, 70-74.	1.1	7
53	On the mechanical and electrical properties of self-assembly-based organosilicate porous films. Journal of Materials Chemistry C, 2017, 5, 8599-8607.	2.7	7
54	Template-dependent hydrophobicity in mesoporous organosilica films. Microporous and Mesoporous Materials, 2018, 259, 111-115.	2.2	7

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55	Area-Selective Deposition by a Combination of Organic Film Passivation and Atomic Layer Deposition. ECS Transactions, 2019, 92, 25-32.	0.3	7
56	Metal barrier induced damage in self-assembly based organosilica low-k dielectrics and its reduction by organic template residues. Applied Surface Science, 2019, 485, 170-178.	3.1	7
57	Area-Selective Atomic Layer Deposition of TiN Using Trimethoxy(octadecyl)silane as a Passivation Layer. Langmuir, 2020, 36, 13144-13154.	1.6	7
58	Nanomechanical Characterization of Organic Surface Passivation Films on 50 nm Patterns during Area-Selective Deposition. ACS Applied Electronic Materials, 2021, 3, 2622-2630.	2.0	7
59	Impact of organic linking and terminal groups on the mechanical properties of self-assembly based low-k dielectrics. Applied Physics Letters, 2017, 111, 161906.	1.5	6
60	Optimization and upscaling of spin coating with organosilane monolayers for low-k pore sealing. Microelectronic Engineering, 2017, 167, 32-36.	1.1	6
61	Area-selective Ru ALD by amorphous carbon modification using H plasma: from atomistic modeling to full wafer process integration. Materials Advances, 2020, 1, 3049-3057.	2.6	6
62	Mixed Organic/Inorganic Abrasive Particles during Oxide CMP. Electrochemical and Solid-State Letters, 2008, 11, H197.	2.2	5
63	(Invited) Wetting Behavior of Aqueous Solutions on High Aspect Ratio Nanopillars with Hydrophilic Surface Finish. ECS Transactions, 2013, 58, 171-182.	0.3	4
64	Wafer Scale Copper Direct Plating on Thin PVD RuTa Layers: A Route to Enable Filling 30 nm Features and Below?. Journal of the Electrochemical Society, 2014, 161, D564-D570.	1.3	4
65	Structural Phases of Alkanethiolate Self-Assembled Monolayers (C_{1â€“12}) on Cu[100] by Density Functional Theory. Journal of Physical Chemistry C, 2020, 124, 3802-3811.	1.5	4
66	The role of atomic oxygen in the decomposition of self-assembled monolayers during area-selective atomic layer deposition. Applied Surface Science, 2022, 586, 152679.	3.1	4
67	Electroless Cu Deposition on Self-assembled Monolayer Alternative Barriers. Materials Research Society Symposia Proceedings, 2009, 1156, 1.	0.1	3
68	Temperature insensitive conductance detection with surface-functionalised silicon nanowire sensors. Microelectronic Engineering, 2011, 88, 1753-1756.	1.1	3
69	Copper CMP with Composite Polymer Core - Silica Shell Abrasives: A Defectivity Study. Materials Research Society Symposia Proceedings, 2008, 1079, 1.	0.1	2
70	Tuning the Properties of Periodic Mesoporous Organosilica Films for Lowâ€k Application by Gemini Surfactants. ChemPhysChem, 2018, 19, 2295-2298.	1.0	2
71	Plasma halogenated a-C:H as growth inhibiting layer for ASD of titanium oxide. , 2020, , .		2
72	Composite polymer core â€“ ceria shell abrasive particles during silicon oxide CMP. Materials Research Society Symposia Proceedings, 2007, 991, 1.	0.1	1

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73	Periodic Mesoporous Organosilica Films with a Tunable Steadyâ€State Mesophase. ChemPhysChem, 2017, 18, 2846-2849.	1.0	1
74	Enabling bottom-up nanoelectronics fabrication by selective solâ€“gel dielectric-on-dielectric deposition. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2021, 263, 114808.	1.7	1