

Gary W Rubloff

List of Publications by Year in Descending Order

Source: <https://exaly.com/author-pdf/3306043/gary-w-rubloff-publications-by-year.pdf>

Version: 2024-04-28

This document has been generated based on the publications and citations recorded by exaly.com. For the latest version of this publication list, visit the link given above.

The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

262
papers

14,539
citations

61
h-index

111
g-index

278
ext. papers

15,682
ext. citations

6.5
avg, IF

6.33
L-index

#	Paper	IF	Citations
262	Nanoscale Li, Na, and K ion-conducting polyphosphazenes by atomic layer deposition.. <i>Dalton Transactions</i> , 2022 ,	4.3	1
261	Low temperature plasma-enhanced atomic layer deposition of sodium phosphorus oxynitride with tunable nitrogen content. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2022 , 40, 032403	2.9	0
260	Ion-Conducting, Electron-Blocking Layer for High-Performance Solid Electrolytes. <i>Small Structures</i> , 2021 , 2, 2100014	8.7	11
259	Al ₂ O ₃ Thin Films on Magnesium: Assessing the Impact of an Artificial Solid Electrolyte Interphase. <i>Frontiers in Energy Research</i> , 2021 , 9,	3.8	2
258	Nanoscale depth and lithiation dependence of V ₂ O ₅ band structure by cathodoluminescence spectroscopy. <i>Journal of Materials Chemistry A</i> , 2020 , 8, 11800-11810	13	5
257	Mg ion-catalyzed polymerization of 1,3-dioxolane in battery electrolytes. <i>Chemical Communications</i> , 2020 , 56, 4583-4586	5.8	5
256	Suppression of hydrogen evolution at catalytic surfaces in aqueous lithium ion batteries. <i>Journal of Materials Chemistry A</i> , 2020 , 8, 14921-14926	13	9
255	Li-Containing Organic Thin Film Structure of Lithium Propane Dioxide via Molecular Layer Deposition. <i>Journal of Physical Chemistry C</i> , 2020 , 124, 6830-6837	3.8	7
254	Atomic Layer Deposition of Sodium Phosphorus Oxynitride: A Conformal Solid-State Sodium-Ion Conductor. <i>ACS Applied Materials & Interfaces</i> , 2020 , 12, 21641-21650	9.5	12
253	Enabling high performance all-solid-state lithium metal batteries using solid polymer electrolytes plasticized with ionic liquid. <i>Electrochimica Acta</i> , 2020 , 345, 136156	6.7	21
252	Elucidating Structural Transformations in Li _x V ₂ O ₅ Electrochromic Thin Films by Multimodal Spectroscopies. <i>Chemistry of Materials</i> , 2020 , 32, 7226-7236	9.6	5
251	Enhancing Lithium Insertion with Electrostatic Nanoconfinement in a Lithography Patterned Precision Cell. <i>ACS Nano</i> , 2019 , 13, 8481-8489	16.7	3
250	High-capacity lithium sulfur battery and beyond: a review of metal anode protection layers and perspective of solid-state electrolytes. <i>Journal of Materials Science</i> , 2019 , 54, 3671-3693	4.3	70
249	Three-Dimensional Solid-State Lithium-Ion Batteries Fabricated by Conformal Vapor-Phase Chemistry. <i>ACS Nano</i> , 2018 , 12, 4286-4294	16.7	68
248	Kinetics-Controlled Degradation Reactions at Crystalline LiPON/Li CoO and Crystalline LiPON/Li-Metal Interfaces. <i>ChemSusChem</i> , 2018 , 11, 1956-1969	8.3	24
247	Nanoscale Protection Layers To Mitigate Degradation in High-Energy Electrochemical Energy Storage Systems. <i>Accounts of Chemical Research</i> , 2018 , 51, 97-106	24.3	25
246	Investigation of the water-stimulated Mg insertion mechanism in an electrodeposited MnO cathode using X-ray photoelectron spectroscopy. <i>Physical Chemistry Chemical Physics</i> , 2018 , 20, 2517-2526	3.6	17

245	Tin Oxynitride Anodes by Atomic Layer Deposition for Solid-State Batteries. <i>Chemistry of Materials</i> , 2018 , 30, 2526-2534	9.6	10
244	Electrochemically Controlled Solid Electrolyte Interphase Layers Enable Superior Li-S Batteries. <i>ACS Applied Materials & Interfaces</i> , 2018 , 10, 24554-24563	9.5	29
243	Highly Conductive, Light Weight, Robust, Corrosion-Resistant, Scalable, All-Fiber Based Current Collectors for Aqueous Acidic Batteries. <i>Advanced Energy Materials</i> , 2018 , 8, 1702615	21.8	46
242	Impact of pore size, interconnections, and dynamic conductivity on the electrochemistry of vanadium pentoxide in well defined porous structures. <i>Physical Chemistry Chemical Physics</i> , 2018 , 20, 29708-29716	3.6	2
241	Epitaxial Welding of Carbon Nanotube Networks for Aqueous Battery Current Collectors. <i>ACS Nano</i> , 2018 , 12, 5266-5273	16.7	36
240	Nanoscale Solid State Batteries Enabled by Thermal Atomic Layer Deposition of a Lithium Polyphosphazene Solid State Electrolyte. <i>Chemistry of Materials</i> , 2017 , 29, 3740-3753	9.6	90
239	Negating interfacial impedance in garnet-based solid-state Li metal batteries. <i>Nature Materials</i> , 2017 , 16, 572-579	27	1192
238	Highly Reversible Conversion-Type FeOF Composite Electrode with Extended Lithium Insertion by Atomic Layer Deposition LiPON Protection. <i>Chemistry of Materials</i> , 2017 , 29, 8780-8791	9.6	29
237	Electron Microscopy Study of ALD Protective Coating on the FeOF Electrode. <i>Microscopy and Microanalysis</i> , 2017 , 23, 2056-2057	0.5	1
236	High performance asymmetric VO-SnO nanopore battery by atomic layer deposition. <i>Nanoscale</i> , 2017 , 9, 11566-11573	7.7	18
235	Stabilization of Lithium Metal Anodes by Hybrid Artificial Solid Electrolyte Interphase. <i>Chemistry of Materials</i> , 2017 , 29, 6298-6307	9.6	124
234	Ultrathin Surface Coating Enables the Stable Sodium Metal Anode. <i>Advanced Energy Materials</i> , 2017 , 7, 1601526	21.8	238
233	A Novel Approach in Sample Preparation of Li Content Materials for TEM Research. <i>Microscopy and Microanalysis</i> , 2017 , 23, 308-309	0.5	
232	ALD Protection of Li-Metal Anode Surfaces [Quantifying and Preventing Chemical and Electrochemical Corrosion in Organic Solvent. <i>Advanced Materials Interfaces</i> , 2016 , 3, 1600426	4.6	43
231	Electrochemical Thin Layers in Nanostructures for Energy Storage. <i>Accounts of Chemical Research</i> , 2016 , 49, 2336-2346	24.3	20
230	A Rechargeable Al/S Battery with an Ionic-Liquid Electrolyte. <i>Angewandte Chemie</i> , 2016 , 128, 10052-10055	35	50
229	A Rechargeable Al/S Battery with an Ionic-Liquid Electrolyte. <i>Angewandte Chemie - International Edition</i> , 2016 , 55, 9898-901	16.4	168
228	Interconnected mesoporous VO electrode: impact on lithium ion insertion rate. <i>Physical Chemistry Chemical Physics</i> , 2016 , 18, 30605-30611	3.6	6

227	The reaction current distribution in battery electrode materials revealed by XPS-based state-of-charge mapping. <i>Physical Chemistry Chemical Physics</i> , 2016 , 18, 19093-102	3.6	11
226	Protocols for Evaluating and Reporting Li-O ₂ Cell Performance. <i>Journal of Physical Chemistry Letters</i> , 2016 , 7, 211-5	6.4	21
225	Solid Electrolyte Lithium Phosphous Oxynitride as a Protective Nanocladding Layer for 3D High-Capacity Conversion Electrodes. <i>ACS Nano</i> , 2016 , 10, 2693-701	16.7	43
224	Perspectives in flow-based microfluidic gradient generators for characterizing bacterial chemotaxis. <i>Biomicrofluidics</i> , 2016 , 10, 061301	3.2	15
223	Distal modulation of bacterial cell-cell signalling in a synthetic ecosystem using partitioned microfluidics. <i>Lab on A Chip</i> , 2015 , 15, 1842-51	7.2	26
222	Atomic Layer Deposition of the Solid Electrolyte LiPON. <i>Chemistry of Materials</i> , 2015 , 27, 5324-5331	9.6	172
221	Chitosan to Connect Biology to Electronics: Fabricating the Bio-Device Interface and Communicating Across This Interface. <i>Polymers</i> , 2015 , 7, 1-46	4.5	74
220	Investigation of the Cathode Catalyst Electrolyte Interface in Aprotic LiO ₂ Batteries. <i>Chemistry of Materials</i> , 2015 , 27, 5305-5313	9.6	47
219	New science at the meso frontier: Dense nanostructure architectures for electrical energy storage. <i>Current Opinion in Solid State and Materials Science</i> , 2015 , 19, 227-234	12	11
218	Next-Generation Lithium Metal Anode Engineering via Atomic Layer Deposition. <i>ACS Nano</i> , 2015 , 9, 5884-5927	10.7	573
217	DMSO-Li ₂ O ₂ Interface in the Rechargeable Li-O ₂ Battery Cathode: Theoretical and Experimental Perspectives on Stability. <i>ACS Applied Materials & Interfaces</i> , 2015 , 7, 11402-11	9.5	57
216	Anodization control for barrier-oxide thinning and 3D interconnected pores and direct electrodeposition of nanowire networks on native aluminium substrates. <i>Physical Chemistry Chemical Physics</i> , 2015 , 17, 3873-9	3.6	9
215	Electrode Degradation Study of Vertically Aligned Carbon Nanotubes on a 3D Integrated Current Collector. <i>Journal of the Electrochemical Society</i> , 2015 , 162, A2372-A2377	3.9	1
214	Surface/Interface Effects on High-Performance Thin-Film All-Solid-State Li-Ion Batteries. <i>ACS Applied Materials & Interfaces</i> , 2015 , 7, 26007-11	9.5	24
213	Enhancing the reversibility of Mg/S battery chemistry through Li(+) mediation. <i>Journal of the American Chemical Society</i> , 2015 , 137, 12388-93	16.4	185
212	Fabrication of 3D core-shell multiwalled carbon nanotube@RuO ₂ lithium-ion battery electrodes through a RuO ₂ atomic layer deposition process. <i>ACS Nano</i> , 2015 , 9, 464-73	16.7	56
211	Activation of a MnO ₂ cathode by water-stimulated Mg(2+) insertion for a magnesium ion battery. <i>Physical Chemistry Chemical Physics</i> , 2015 , 17, 5256-64	3.6	105
210	Simple SERS substrates: powerful, portable, and full of potential. <i>Physical Chemistry Chemical Physics</i> , 2014 , 16, 2224-39	3.6	171

209	Nanostructured Pseudocapacitors Based on Atomic Layer Deposition of V ₂ O ₅ onto Conductive Nanocrystal-based Mesoporous ITO Scaffolds. <i>Advanced Functional Materials</i> , 2014 , 24, 6717-6728	15.6	68
208	An all-in-one nanopore battery array. <i>Nature Nanotechnology</i> , 2014 , 9, 1031-9	28.7	164
207	Electronic modulation of biochemical signal generation. <i>Nature Nanotechnology</i> , 2014 , 9, 605-10	28.7	43
206	Air bubble-initiated biofabrication of freestanding, semi-permeable biopolymer membranes in PDMS microfluidics. <i>Biochemical Engineering Journal</i> , 2014 , 89, 2-9	4.2	19
205	Investigation of Atomic Layer Deposited Metal Oxide Layers for Conservation of Metal Cultural Heritage Objects*. <i>Microscopy and Microanalysis</i> , 2014 , 20, 2002-2003	0.5	
204	Atomic Layer Deposition and in Situ Characterization of Ultraclean Lithium Oxide and Lithium Hydroxide. <i>Journal of Physical Chemistry C</i> , 2014 , 118, 27749-27753	3.8	58
203	In situ transmission electron microscopy study of electrochemical lithiation and delithiation cycling of the conversion anode RuO ₂ . <i>ACS Nano</i> , 2013 , 7, 6354-60	16.7	69
202	Perspective: hybrid systems combining electrostatic and electrochemical nanostructures for ultrahigh power energy storage. <i>Energy and Environmental Science</i> , 2013 , 6, 2578	35.4	29
201	From nanoscience to solutions in electrochemical energy storage. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2013 , 31, 058503	2.9	14
200	Biofabricating the Bio-Device Interface Using Biological Materials and Mechanisms 2013 , 239-257		0
199	Reactivation of dissolved polysulfides in LiB batteries based on atomic layer deposition of Al ₂ O ₃ in nanoporous carbon cloth. <i>Nano Energy</i> , 2013 , 2, 1197-1206	17.1	169
198	Examining the role of hydrogen in the electrical performance of in situ fabricated metal-insulator-metal trilayers using an atomic layer deposited Al ₂ O ₃ dielectric. <i>Applied Physics Letters</i> , 2013 , 102, 173501	3.4	24
197	Solid flexible electrochemical supercapacitor using Tobacco mosaic virus nanostructures and ALD ruthenium oxide. <i>Journal of Micromechanics and Microengineering</i> , 2013 , 23, 114014	2	29
196	Electrodeposition of a weak polyelectrolyte hydrogel: remarkable effects of salt on kinetics, structure and properties. <i>Soft Matter</i> , 2013 , 9, 2703	3.6	51
195	A beaded-string silicon anode. <i>ACS Nano</i> , 2013 , 7, 2717-24	16.7	65
194	Accessing biology@ toolbox for the mesoscale biofabrication of soft matter. <i>Soft Matter</i> , 2013 , 9, 6019	3.6	30
193	Natural cellulose fiber as substrate for supercapacitor. <i>ACS Nano</i> , 2013 , 7, 6037-46	16.7	267
192	Optically clear alginate hydrogels for spatially controlled cell entrapment and culture at microfluidic electrode surfaces. <i>Lab on A Chip</i> , 2013 , 13, 1854-8	7.2	33

191	Role of mesoporosity in cellulose fibers for paper-based fast electrochemical energy storage. <i>Journal of Materials Chemistry A</i> , 2013 , 1, 8201	13	23
190	Cathodic ALD V2O5 thin films for high-rate electrochemical energy storage. <i>RSC Advances</i> , 2013 , 3, 42943-7	3.7	49
189	Evidence for hydrogen two-level systems in atomic layer deposition oxides. <i>Applied Physics Letters</i> , 2013 , 103, 162601	3.4	16
188	Autonomous bacterial localization and gene expression based on nearby cell receptor density. <i>Molecular Systems Biology</i> , 2013 , 9, 636	12.2	56
187	Biofabrication of stratified biofilm mimics for observation and control of bacterial signaling. <i>Biomaterials</i> , 2012 , 33, 5136-43	15.6	39
186	Conduction in ultrathin ruthenium electrodes prepared by atomic layer deposition. <i>Materials Letters</i> , 2012 , 73, 43-46	3.3	15
185	Electrochemical performance of the nanostructured biotemplated V2O5 cathode for lithium-ion batteries. <i>Journal of Power Sources</i> , 2012 , 206, 282-287	8.9	65
184	Electroaddressing Functionalized Polysaccharides as Model Biofilms for Interrogating Cell Signaling. <i>Advanced Functional Materials</i> , 2012 , 22, 519-528	15.6	52
183	Ozone-Based Atomic Layer Deposition of Crystalline V2O5 Films for High Performance Electrochemical Energy Storage. <i>Chemistry of Materials</i> , 2012 , 24, 1255-1261	9.6	110
182	Electrodeposition of a biopolymeric hydrogel: potential for one-step protein electroaddressing. <i>Biomacromolecules</i> , 2012 , 13, 1181-9	6.9	68
181	Characterization of the cathodic electrodeposition of semicrystalline chitosan hydrogel. <i>Materials Letters</i> , 2012 , 87, 97-100	3.3	37
180	Biofabrication: programmable assembly of polysaccharide hydrogels in microfluidics as biocompatible scaffolds. <i>Journal of Materials Chemistry</i> , 2012 , 22, 7659		71
179	Nanoengineering strategies for metal-insulator-metal electrostatic nanocapacitors. <i>ACS Nano</i> , 2012 , 6, 3528-36	16.7	57
178	MWCNT/V2O5 core/shell sponge for high areal capacity and power density Li-ion cathodes. <i>ACS Nano</i> , 2012 , 6, 7948-55	16.7	219
177	Direct SERS detection of contaminants in a complex mixture: rapid, single step screening for melamine in liquid infant formula. <i>Analyst, The</i> , 2012 , 137, 826-8	5	62
176	Biofabricating Multifunctional Soft Matter with Enzymes and Stimuli-Responsive Materials. <i>Advanced Functional Materials</i> , 2012 , 22, 3004-3012	15.6	50
175	Integrated biofabrication for electro-addressed in-film bioprocessing. <i>Biotechnology Journal</i> , 2012 , 7, 428-39	5.6	10
174	Role of surface intermediates in enhanced, uniform growth rates of TiO2 atomic layer deposition thin films using titanium tetraisopropoxide and ozone. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2012 , 30, 01A150	2.9	18

173	Confined propagation of covalent chemical reactions on single-walled carbon nanotubes. <i>Nature Communications</i> , 2011 , 2, 382	17.4	63
172	Atomic Layer Deposition of Ruthenium Using the Novel Precursor bis(2,6,6-trimethyl-cyclohexadienyl)ruthenium. <i>Chemistry of Materials</i> , 2011 , 23, 2650-2656	9.6	44
171	Biocompatible multi-address 3D cell assembly in microfluidic devices using spatially programmable gel formation. <i>Lab on A Chip</i> , 2011 , 11, 2316-8	7.2	56
170	Biofabrication of chitosan-silver composite SERS substrates enabling quantification of adenine by a spectroscopic shift. <i>Biofabrication</i> , 2011 , 3, 034108	10.5	10
169	Coupling electrodeposition with layer-by-layer assembly to address proteins within microfluidic channels. <i>Advanced Materials</i> , 2011 , 23, 5817-21	24	71
168	Mixed mode, ionic-electronic diode using atomic layer deposition of V2O5 and ZnO films. <i>Journal of Materials Chemistry</i> , 2011 , 21, 15391		9
167	MnO2/TiN heterogeneous nanostructure design for electrochemical energy storage. <i>Physical Chemistry Chemical Physics</i> , 2011 , 13, 15221-6	3.6	47
166	High to ultra-high power electrical energy storage. <i>Physical Chemistry Chemical Physics</i> , 2011 , 13, 20714-23	3.3	109
165	Electroaddressing agarose using Fmoc-phenylalanine as a temporary scaffold. <i>Langmuir</i> , 2011 , 27, 7380-4		20
164	Mechanism of anodic electrodeposition of calcium alginate. <i>Soft Matter</i> , 2011 , 7, 5677	3.6	86
163	Chitosan to electroaddress biological components in lab-on-a-chip devices. <i>Carbohydrate Polymers</i> , 2011 , 84, 704-708	10.3	10
162	Correlation of Raman, electrical, and optical properties of high- κ atomic layer deposited Al-doped TiO2. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , 2011 , 29, 041807-3	1.3	7
161	Impact of parasitic reactions on wafer-scale uniformity in water-based and ozone-based atomic layer deposition. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2011 , 29, 051509	2.9	24
160	Biofabrication to build the biology-device interface. <i>Biofabrication</i> , 2010 , 2, 022002	10.5	73
159	Structural, electrical, and optical properties of atomic layer deposition Al-doped ZnO films. <i>Journal of Applied Physics</i> , 2010 , 108, 043504	2.5	278
158	Applicability of Surface Enhanced Raman Spectroscopy for Determining the Concentration of Adenine and S-Adenosyl Homocysteine in a Microfluidic System. <i>IFMBE Proceedings</i> , 2010 , 301-304	0.2	2
157	Profile evolution for conformal atomic layer deposition over nanotopography. <i>ACS Nano</i> , 2010 , 4, 4637-46	46.7	31
156	Chitosan: an integrative biomaterial for lab-on-a-chip devices. <i>Lab on A Chip</i> , 2010 , 10, 3026-42	7.2	158

155	Formation of Dendritic Silver Substrates by Galvanic Displacement for Surface Enhanced Raman Spectroscopy. <i>IFMBE Proceedings</i> , 2010 , 313-316	0.2	
154	In situ generation of pH gradients in microfluidic devices for biofabrication of freestanding, semi-permeable chitosan membranes. <i>Lab on A Chip</i> , 2010 , 10, 59-65	7.2	50
153	Mechanism and Direct Visualization of Electrodeposition of the Polysaccharide Chitosan. <i>IFMBE Proceedings</i> , 2010 , 401-403	0.2	
152	Biological nanofactories facilitate spatially selective capture and manipulation of quorum sensing bacteria in a bioMEMS device. <i>Lab on A Chip</i> , 2010 , 10, 1128-34	7.2	31
151	In situ quantitative visualization and characterization of chitosan electrodeposition with paired sidewall electrodes. <i>Soft Matter</i> , 2010 , 6, 3177	3.6	130
150	In-Film Bioprocessing and Immunoanalysis with Electroaddressable Stimuli-Responsive Polysaccharides. <i>Advanced Functional Materials</i> , 2010 , 20, 1645-1652	15.6	32
149	Integration of Diverse Biological Materials in Micro/Nano Devices. <i>NATO Science for Peace and Security Series B: Physics and Biophysics</i> , 2010 , 275-285	0.2	
148	ALD based Metal-insulator-metal (MIM) Nanocapacitors for Energy Storage. <i>ECS Transactions</i> , 2009 , 25, 345-353	1	10
147	Electroaddressing of Cell Populations by Co-Deposition with Calcium Alginate Hydrogels. <i>Advanced Functional Materials</i> , 2009 , 19, 2074-2080	15.6	101
146	Nanotubular metal-insulator-metal capacitor arrays for energy storage. <i>Nature Nanotechnology</i> , 2009 , 4, 292-6	28.7	307
145	Spatial resolution in chitosan-based programmable biomolecular scaffolds. <i>Soft Matter</i> , 2009 , 5, 3677	3.6	17
144	Crystallization Behavior of HfO ₂ Nanotubes in Different Environments. <i>Microscopy and Microanalysis</i> , 2009 , 15, 1250-1251	0.5	3
143	Programmable assembly of a metabolic pathway enzyme in a pre-packaged reusable bioMEMS device. <i>Lab on A Chip</i> , 2008 , 8, 420-30	7.2	49
142	Design optimization for bioMEMS studies of enzyme-controlled metabolic pathways. <i>Biomedical Microdevices</i> , 2008 , 10, 899-908	3.7	12
141	TEM-based metrology for HfO ₂ layers and nanotubes formed in anodic aluminum oxide nanopore structures. <i>Small</i> , 2008 , 4, 1223-32	11	60
140	Chitosan biotinylation and electrodeposition for selective protein assembly. <i>Macromolecular Bioscience</i> , 2008 , 8, 451-7	5.5	23
139	Protein assembly onto patterned microfabricated devices through enzymatic activation of fusion pro-tag. <i>Biotechnology and Bioengineering</i> , 2008 , 99, 499-507	4.9	31
138	Towards area-based in vitro metabolic engineering: assembly of Pfs enzyme onto patterned microfabricated chips. <i>Biotechnology Progress</i> , 2008 , 24, 1042-51	2.8	15

137	A comparative study of reactor designs for the production of graded films with applications to combinatorial CVD. <i>Journal of Crystal Growth</i> , 2008 , 310, 270-283	1.6	9
136	Mechano-transduction of DNA hybridization and dopamine oxidation through electrodeposited chitosan network. <i>Lab on A Chip</i> , 2007 , 7, 103-11	7.2	40
135	TMV microarrays: hybridization-based assembly of DNA-programmed viral nanotemplates. <i>Langmuir</i> , 2007 , 23, 2663-7	4	54
134	Towards an in vivo biologically inspired nanofactory. <i>Nature Nanotechnology</i> , 2007 , 2, 3-7	28.7	152
133	Real-time sensing and metrology for atomic layer deposition processes and manufacturing. <i>Journal of Vacuum Science & Technology B</i> , 2007 , 25, 130		22
132	Multiplexed mass spectrometry for real-time sensing in a spatially programmable chemical vapor deposition reactor. <i>Journal of Vacuum Science & Technology B</i> , 2007 , 25, 1288		3
131	In Situ Mass Spectrometry for Chemical Identification in SiC Epitaxial Deposition. <i>Materials Science Forum</i> , 2007 , 556-557, 121-124	0.4	
130	Demonstration of spatially programmable chemical vapor deposition: Model-based uniformity/nonuniformity control. <i>Journal of Vacuum Science & Technology B</i> , 2006 , 24, 2706		7
129	Real-time observation and optimization of tungsten atomic layer deposition process cycle. <i>Journal of Vacuum Science & Technology B</i> , 2006 , 24, 780		20
128	Chitosan-mediated in situ biomolecule assembly in completely packaged microfluidic devices. <i>Lab on A Chip</i> , 2006 , 6, 1315-21	7.2	63
127	Electrochemical study of chitosan films deposited from solution at reducing potentials. <i>Electrochimica Acta</i> , 2006 , 51, 5324-5333	6.7	92
126	Validating gallium nitride growth kinetics using a precursor delivery showerhead as a novel chemical reactor. <i>Journal of Crystal Growth</i> , 2006 , 296, 15-26	1.6	8
125	A fabrication platform for electrically mediated optically active biofunctionalized sites in BioMEMS. <i>Lab on A Chip</i> , 2005 , 5, 583-6	7.2	24
124	Patterned assembly of genetically modified viral nanotemplates via nucleic acid hybridization. <i>Nano Letters</i> , 2005 , 5, 1931-6	11.5	136
123	Signal-directed sequential assembly of biomolecules on patterned surfaces. <i>Langmuir</i> , 2005 , 21, 2104-7	4	42
122	Biofabrication with chitosan. <i>Biomacromolecules</i> , 2005 , 6, 2881-94	6.9	593
121	Simulation-based design and experimental evaluation of a spatially controllable CVD reactor. <i>AIChE Journal</i> , 2005 , 51, 572-584	3.6	12
120	Thin-film transformations and volatile products in the formation of nanoporous low-k polymethylsilsesquioxane-based dielectric. <i>Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena</i> , 2005 , 23, 908		14

119	In situ chemical sensing in AlGaInGaN high electron mobility transistor metalorganic chemical vapor deposition process for real-time prediction of product crystal quality and advanced process control. <i>Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena</i> , 2005 , 23, 1286		5
118	Real-time material quality prediction, fault detection, and contamination control in AlGaInGaN high electron mobility transistor metalorganic chemical vapor deposition process using in situ chemical sensing. <i>Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena</i> , 2005 , 23, 1296		2
117	In situ chemical sensing in AlGaInGaN metal organic chemical vapor deposition process for precision film thickness metrology and real-time advanced process control. <i>Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena</i> , 2005 , 23, 2007		1
116	Development of a spatially controllable chemical vapor deposition reactor with combinatorial processing capabilities. <i>Review of Scientific Instruments</i> , 2005 , 76, 062217	1.7	18
115	Data management and visualization of x-ray diffraction spectra from thin film ternary composition spreads. <i>Review of Scientific Instruments</i> , 2005 , 76, 062223	1.7	37
114	In situ mass spectrometry in a 10 Torr W chemical vapor deposition process for film thickness metrology and real-time advanced process control. <i>Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena</i> , 2004 , 22, 666		6
113	Real-time acoustic sensing and control of metalorganic chemical vapor deposition precursor concentrations delivered from solid phase sources. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2004 , 22, 1984-1991	2.9	8
112	ToF-SIMS studies of nanoporous PMSSQ materials: kinetics and reactions in the processing of low-K dielectrics for ULSI applications. <i>Surface and Interface Analysis</i> , 2004 , 36, 304-310	1.5	6
111	Dynamic simulation and optimization of Cu CVD unit process for environmentally benign manufacturing. <i>IEEE Transactions on Semiconductor Manufacturing</i> , 2004 , 17, 455-469	2.6	1
110	A robust technique for assembly of nucleic acid hybridization chips based on electrochemically templated chitosan. <i>Analytical Chemistry</i> , 2004 , 76, 365-72	7.8	50
109	Thermo-biolithography: a technique for patterning nucleic acids and proteins. <i>Langmuir</i> , 2004 , 20, 906-13		23
108	Real-time, in situ film thickness metrology in a 10 Torr W chemical vapor deposition process using an acoustic sensor. <i>Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena</i> , 2003 , 21, 1055		6
107	Spatially Selective Deposition of a Reactive Polysaccharide Layer onto a Patterned Template. <i>Langmuir</i> , 2003 , 19, 519-524	4	101
106	Nature-Inspired Creation of Protein Polysaccharide Conjugate and Its Subsequent Assembly onto a Patterned Surface. <i>Langmuir</i> , 2003 , 19, 9382-9386	4	92
105	Electrochemically Induced Deposition of a Polysaccharide Hydrogel onto a Patterned Surface. <i>Langmuir</i> , 2003 , 19, 4058-4062	4	170
104	American Vacuum Society leadership in electronic materials processing: Past, present, and future. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2003 , 21, S175-S181	2.9	
103	Voltage-Dependent Assembly of the Polysaccharide Chitosan onto an Electrode Surface. <i>Langmuir</i> , 2002 , 18, 8620-8625	4	242
102	Thickness metrology and end point control in W chemical vapor deposition process from SiH ₄ /WF ₆ using in situ mass spectrometry. <i>Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena</i> , 2002 , 20, 2351		10

101	Run to run control in tungsten chemical vapor deposition using H ₂ /WF ₆ at low pressures. <i>Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena</i> , 2001 , 19, 1931		10
100	Influence of gas composition on wafer temperature in a tungsten chemical vapor deposition reactor: Experimental measurements, model development, and parameter identification. <i>Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena</i> , 2001 , 19, 230		11
99	Real-time growth rate metrology for a tungsten chemical vapor deposition process by acoustic sensing. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2001 , 19, 621-626	2.9	7
98	Process diagnostics and thickness metrology using in situ mass spectrometry for the chemical vapor deposition of W From H ₂ /WF ₆ . <i>Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena</i> , 2000 , 18, 1352		14
97	Evaluating the impact of process changes on cluster tool performance. <i>IEEE Transactions on Semiconductor Manufacturing</i> , 2000 , 13, 181-192	2.6	19
96	Process sensing and metrology in gate oxide growth by rapid thermal chemical vapor deposition from SiH ₄ and N ₂ O. <i>Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena</i> , 1999 , 17, 1417		11
95	The design of history mechanisms and their use in collaborative educational simulations 1999 ,		18
94	Integrated dynamic simulation of rapid thermal chemical vapor deposition of polysilicon. <i>IEEE Transactions on Semiconductor Manufacturing</i> , 1998 , 11, 63-74	2.6	6
93	Real-time process sensing and metrology in amorphous and selective area silicon plasma enhanced chemical vapor deposition using in situ mass spectrometry. <i>Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena</i> , 1997 , 15, 127		18
92	. <i>IEEE Transactions on Semiconductor Manufacturing</i> , 1997 , 10, 390-398	2.6	4
91	Contamination control for gas delivery from a liquid source in semiconductor manufacturing. <i>IEEE Transactions on Semiconductor Manufacturing</i> , 1997 , 10, 425-432	2.6	2
90	Role of gas phase reactions in subatmospheric chemical-vapor deposition ozone/TEOS processes for oxide deposition. <i>Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena</i> , 1996 , 14, 772		12
89	Subatmospheric chemical vapor deposition ozone/TEOS process for SiO ₂ trench filling. <i>Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena</i> , 1995 , 13, 1888		32
88	Real-time process and product diagnostics in rapid thermal chemical vapor deposition using in situ mass spectrometric sampling. <i>Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena</i> , 1995 , 13, 1924		27
87	Role of implantation-induced defects in surface-oriented diffusion of fluorine in silicon. <i>Journal of Applied Physics</i> , 1994 , 76, 3403-3409	2.5	46
86	Concepts in competitive microelectronics manufacturing. <i>Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena</i> , 1994 , 12, 2727		3
85	. <i>IEEE Transactions on Semiconductor Manufacturing</i> , 1994 , 7, 96-100	2.6	3
84	Chemical vapor deposition of rough-morphology silicon films over a broad temperature range. <i>Applied Physics Letters</i> , 1993 , 63, 1387-1389	3.4	6

83	Positron annihilation at the Si/SiO ₂ interface. <i>Journal of Applied Physics</i> , 1992 , 71, 530-532	2.5	12
82	Anomalous diffusion of fluorine in silicon. <i>Applied Physics Letters</i> , 1992 , 61, 1310-1312	3.4	69
81	Kinetics of nucleation and growth of Si on SiO ₂ in very low pressure SiH ₄ chemical vapor deposition. <i>Applied Physics Letters</i> , 1992 , 61, 3035-3037	3.4	15
80	Positron annihilation studies in the field induced depletion regions of metal-oxide-semiconductor structures. <i>Journal of Applied Physics</i> , 1992 , 71, 5606-5609	2.5	6
79	Noninvasive picosecond ultrasonic detection of ultrathin interfacial layers: CF _x at the Al/Si interface. <i>Applied Physics Letters</i> , 1992 , 61, 1787-1789	3.4	50
78	Nondestructive detection of titanium disilicide phase transformation by picosecond ultrasonics. <i>Applied Physics Letters</i> , 1992 , 61, 2700-2702	3.4	15
77	Integrated processing for microelectronics science and technology. <i>IBM Journal of Research and Development</i> , 1992 , 36, 233-276	2.5	12
76	SiO ₂ /Si interface properties using positrons. <i>Physical Review B</i> , 1991 , 44, 5885-5888	3.3	17
75	Centroid shift of γ rays from positron annihilation in the depletion region of metal-oxide-semiconductor structures. <i>Applied Physics Letters</i> , 1991 , 58, 86-88	3.4	7
74	Surface etching and roughening in integrated processing of thermal oxides. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 1991 , 9, 1058-1065	2.9	36
73	Microvoids and defect chemistry at the Si/SiO ₂ interface studied by positron annihilation depth profiling. <i>Vacuum</i> , 1990 , 41, 790-792	3.7	11
72	X-ray reflectivity study of SiO ₂ on Si. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 1990 , 8, 2046-2048	2.9	24
71	Ultraclean, integrated processing of thermal oxide structures. <i>Applied Physics Letters</i> , 1990 , 57, 1254-1256	3.4	30
70	Defect microchemistry in SiO ₂ /Si structures. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 1990 , 8, 1857-1863	2.9	65
69	Maskless selected area processing. <i>Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena</i> , 1989 , 7, 1454		8
68	Microvoids at the SiO ₂ /Si interface. <i>Physical Review B</i> , 1989 , 40, 1434-1437	3.3	44
67	Surface analysis of realistic semiconductor microstructures. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 1989 , 7, 1030-1034	2.9	42
66	Hole trapping in SiO ₂ films annealed in low-pressure oxygen atmosphere. <i>Journal of Applied Physics</i> , 1987 , 62, 925-930	2.5	28

65	Role of oxygen in defect-related breakdown in thin SiO ₂ films on Si (100). <i>Journal of Applied Physics</i> , 1987 , 61, 4584-4588	2.5	31
64	Summary Abstract: Integrated system for studies of thin-film chemical growth processes on silicon wafers. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 1987 , 5, 2098-2099	2.9	3
63	Defect microchemistry at the SiO ₂ /Si interface. <i>Physical Review Letters</i> , 1987 , 58, 2379-2382	7.4	66
62	Kinetics of high-temperature thermal decomposition of SiO ₂ on Si(100). <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 1987 , 5, 1559-1562	2.9	141
61	High temperature reaction and defect chemistry at the Si/SiO ₂ interface. <i>Applied Surface Science</i> , 1987 , 30, 25-31	6.7	11
60	Bonding and adhesion of polymer interfaces. <i>Materials Science and Engineering</i> , 1986 , 83, 213-226		37
59	Semiconductor interfaces. <i>Materials Science and Engineering</i> , 1986 , 83, 227-237		0
58	Influence of thin SiO ₂ interlayers on chemical reaction and microstructure at the Ni/Si(111) interface. <i>Physical Review B</i> , 1986 , 33, 5517-5525	3.3	27
57	Low temperature material reaction at the Ti/Si(111) interface. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 1986 , 4, 865-868	2.9	31
56	Summary Abstract: High temperature decomposition of SiO ₂ at the Si/SiO ₂ interface. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 1986 , 4, 1024-1025	2.9	4
55	Defect formation in thermal SiO ₂ by high-temperature annealing. <i>Applied Physics Letters</i> , 1986 , 49, 1525-1527	3.1	38
54	Material reaction and silicide formation at the refractory metal/silicon interface. <i>Applied Physics Letters</i> , 1986 , 48, 1600-1602	3.4	41
53	Summary Abstract: High resolution synchrotron photoemission study of silicon-metal interfaces. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 1985 , 3, 690-691	2.9	1
52	High-temperature SiO ₂ decomposition at the SiO ₂ /Si interface. <i>Physical Review Letters</i> , 1985 , 55, 2332-2335	7.1	305
51	Chemical bonding and reaction at metal/polymer interfaces. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 1985 , 3, 739-745	2.9	158
50	Chemical reactions at Pt/oxide/Si and Ti/oxide/Si interfaces. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 1985 , 3, 983-986	2.9	48
49	Raman spectroscopy of PtSi formation at the Pt/Si(100) interface. <i>Applied Physics Letters</i> , 1984 , 44, 430-432	3.4	23
48	Chemical reaction and Schottky-barrier formation at V/Si interfaces. <i>Physical Review B</i> , 1984 , 29, 1540-1550		40

47	Chemical reaction and silicide formation at the Pt/Si interface. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 1984 , 2, 253-258	2.9	41
46	Raman spectroscopy of silicide formation at the Pt/crystalline Si interface. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 1984 , 2, 556-560	2.9	17
45	Chemical bonding at the polyimide surface. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 1984 , 2, 756-760	2.9	49
44	Silicide/silicon interface bonding. <i>Ultramicroscopy</i> , 1984 , 14, 107-119	3.1	4
43	Chemical and structural aspects of reaction at the Ti/Si interface. <i>Physical Review B</i> , 1984 , 30, 5421-5429	3.3	93
42	Formation of the Schottky barrier at the Pd/Si interface. <i>Physica B: Physics of Condensed Matter & C: Atomic, Molecular and Plasma Physics, Optics</i> , 1983 , 117-118, 834-836		2
41	Microscopic properties and behavior of silicide interfaces. <i>Surface Science</i> , 1983 , 132, 268-314	1.8	161
40	Chemical bonding and reactions at Ti/Si and Ti/oxygen/Si interfaces. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 1983 , 1, 771-775	2.9	70
39	Schottky barrier formation at Pd, Pt, and Ni/Si(111) interfaces. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 1983 , 1, 566-569	2.9	28
38	Microscopic properties and behavior of metal/semiconductor interfaces 1983 , 179-206		5
37	Interface states at the Pt silicide/Si interface. <i>Physical Review B</i> , 1982 , 25, 4307-4309	3.3	25
36	The formation of the Schottky barrier at the V/Si interface. <i>Journal of Vacuum Science and Technology</i> , 1982 , 20, 684-687		33
35	Summary Abstract: Schottky barrier formation at Pd/Si(111) and V/Si(111) interfaces. <i>Journal of Vacuum Science and Technology</i> , 1982 , 21, 615-616		19
34	Electronic structure of silicide-silicon interfaces. <i>Thin Solid Films</i> , 1982 , 93, 21-40	2.2	29
33	Electronic states and microstructure at the silicide-silicon interface. <i>Thin Solid Films</i> , 1982 , 89, 433-446	2.2	38
32	Electronic states and atomic structure at the Pd ₂ Si/Si interface. <i>Journal of Vacuum Science and Technology</i> , 1981 , 18, 937-943		51
31	Chemical bonding and reactions at the Pd/Si interface. <i>Physical Review B</i> , 1981 , 23, 4183-4196	3.3	126
30	Reactive Schottky barrier formation: The Pd/Si interface. <i>Journal of Vacuum Science and Technology</i> , 1980 , 17, 916-919		27

29	Chemical bonding and electronic structure of Pd ₂ Si. <i>Physical Review B</i> , 1980 , 22, 4784-4790	3.3	172
28	Exciton or hydrogen diffusion in SiO ₂ ?. <i>Journal of Applied Physics</i> , 1979 , 50, 5757-5760	2.5	50
27	Photoemission studies of time-resolved surface reactions: Isothermal desorption of CO from Ni(111). <i>Surface Science</i> , 1979 , 89, 566-574	1.8	28
26	Chemical and structural properties of the Pd/Si interface during the initial stages of silicide formation. <i>Journal of Vacuum Science and Technology</i> , 1979 , 16, 1120-1124		54
25	Microscopic Compound Formation at the Pd-Si(111) Interface. <i>Physical Review Letters</i> , 1979 , 43, 1836-1839		113
24	Transmission, photoconductivity, and the experimental band gap of thermally grown SiO ₂ films. <i>Physical Review B</i> , 1979 , 19, 3107-3117	3.3	171
23	Selection rule effects in electronic excitations of chemisorbed molecules as studied by energy loss spectroscopy. <i>Solid State Communications</i> , 1978 , 26, 523-525	1.6	32
22	Cyclohexane dehydrogenation on clean Pd surfaces studied by UV photoemission. <i>Journal of Catalysis</i> , 1978 , 53, 423-427	7.3	19
21	Exciton transport in SiO ₂ as a possible cause of surface-state generation in MOS structures. <i>Applied Physics Letters</i> , 1978 , 32, 184-186	3.4	34
20	Chemisorption of organic molecules on ZnO(11 00) surfaces: C ₅ H ₅ N, (CH ₃) ₂ CO, and (CH ₃) ₂ SO. <i>Surface Science</i> , 1978 , 74, 365-372	1.8	16
19	Surface optical excitations associated with CO chemisorption on Ni(111). <i>Physical Review B</i> , 1978 , 17, 4680-4688	3.3	44
18	Ultraviolet photoemission and flash-desorption studies of the chemisorption and decomposition of methanol on Ni(111). <i>Journal of Vacuum Science and Technology</i> , 1977 , 14, 419-423		104
17	Chemisorption and decomposition reactions of oxygen-containing organic molecules on clean Pd surfaces studied by UV photoemission. <i>Surface Science</i> , 1977 , 63, 325-338	1.8	91
16	Ultraviolet-photoemission studies of formic acid decomposition on ZnO nonpolar surfaces. <i>Solid State Communications</i> , 1976 , 18, 1427-1430	1.6	48
15	Orbital energy shifts associated with chemical bonding of organic molecules on ZnO nonpolar surfaces. <i>Chemical Physics Letters</i> , 1976 , 39, 493-496	2.5	49
14	Unusual extramolecular relaxation-polarization shifts of low-lying orbitals in the uv photoemission spectra of adsorbed organic molecules. <i>Physical Review B</i> , 1976 , 14, 1450-1457	3.3	46
13	Optical Reflectance Spectroscopy of Surface States in H ₂ Chemisorption on W(100). <i>Physical Review Letters</i> , 1974 , 32, 667-670	7.4	45
12	Resonance Raman scattering under [111] uniaxial stress in the region of the E ₁ gap in InAs. <i>Physical Review B</i> , 1974 , 9, 551-553	3.3	14

11	Surface reflectance spectroscopy studies of chemisorption on W(100). <i>Physical Review B</i> , 1974 , 10, 2401-2415	3.9	66
10	Optical reflectance studies of chemisorption on a clean metal surface. <i>Solid State Communications</i> , 1973 , 12, 825-828	1.6	17
9	Resonance Raman scattering in InAs near the E1 gap. <i>Solid State Communications</i> , 1973 , 13, 1755-1759	1.6	23
8	Optical spectroscopy of surfaces: Reflectance studies of chemisorption. <i>Surface Science</i> , 1973 , 37, 75-81	1.8	21
7	Local-Field Effects in the Optical Properties of Solids: The Far-Ultraviolet Spectra of Ionic Crystals. <i>Physical Review Letters</i> , 1973 , 30, 794-797	7.4	25
6	Piezo-optical Evidence for π Transitions at the 3.4-eV Optical Structure of Silicon. <i>Physical Review Letters</i> , 1972 , 29, 789-792	7.4	58
5	Far-Ultraviolet Reflectance Spectra and the Electronic Structure of Ionic Crystals. <i>Physical Review B</i> , 1972 , 5, 662-684	3.3	334
4	Normal-Incidence Reflectance, Optical Properties, and Electronic Structure of Zn. <i>Physical Review B</i> , 1971 , 3, 285-292	3.3	21
3	Far-Ultraviolet Reflectance Spectra of Ionic Crystals. <i>Physical Review Letters</i> , 1971 , 26, 1317-1320	7.4	20
2	Far Ultraviolet Spectroscopy of Solids in the Range 6B6 eV Using Synchrotron Radiation from an Electron Storage Ring. <i>Review of Scientific Instruments</i> , 1971 , 42, 1507-1513	1.7	28
1	A normal incidence scanning reflectometer of high precision. <i>Applied Optics</i> , 1969 , 8, 305-8	1.7	50