

# Max G Lagally

## List of Publications by Citations

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89  
papers

4,039  
citations

31  
h-index

62  
g-index

102  
ext. papers

4,368  
ext. citations

9  
avg, IF

5.23  
L-index

#	Paper	IF	Citations
89	Atomistic Processes in the Early Stages of Thin-Film Growth. <i>Science</i> , <b>1997</b> , 276, 377-83	33.3	819
88	Elastically relaxed free-standing strained-silicon nanomembranes. <i>Nature Materials</i> , <b>2006</b> , 5, 388-93	27	200
87	Direct-bandgap light-emitting germanium in tensilely strained nanomembranes. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2011</b> , 108, 18893-8	11.5	186
86	Electronic transport in nanometre-scale silicon-on-insulator membranes. <i>Nature</i> , <b>2006</b> , 439, 703-6	50.4	149
85	Direct oriented growth of armchair graphene nanoribbons on germanium. <i>Nature Communications</i> , <b>2015</b> , 6, 8006	17.4	134
84	Bonding-geometry dependence of fractal growth on metal surfaces. <i>Physical Review Letters</i> , <b>1994</b> , 73, 1829-1832	7.4	134
83	Electronically driven structure changes of Si captured by femtosecond electron diffraction. <i>Physical Review Letters</i> , <b>2008</b> , 100, 155504	7.4	133
82	Atomic-scale mechanisms for surfactant-mediated layer-by-layer growth in homoepitaxy. <i>Physical Review Letters</i> , <b>1994</b> , 72, 693-696	7.4	120
81	Semiconductors turn soft: inorganic nanomembranes. <i>Soft Matter</i> , <b>2010</b> , 6, 439-455	3.6	101
80	Elastically strain-sharing nanomembranes: flexible and transferable strained silicon and silicon-germanium alloys. <i>Journal Physics D: Applied Physics</i> , <b>2007</b> , 40, R75-R92	3	97
79	High-speed strained-single-crystal-silicon thin-film transistors on flexible polymers. <i>Journal of Applied Physics</i> , <b>2006</b> , 100, 013708	2.5	97
78	Flexible photodetectors on plastic substrates by use of printing transferred single-crystal germanium membranes. <i>Applied Physics Letters</i> , <b>2009</b> , 94, 013102	3.4	95
77	Kinematic Low-Energy Electron-Diffraction Intensities from Averaged Data: A Method for Surface Crystallography. <i>Physical Review Letters</i> , <b>1971</b> , 26, 1557-1560	7.4	94
76	Gate fidelity and coherence of an electron spin in an Si/SiGe quantum dot with micromagnet. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2016</b> , 113, 11738-11743	11.5	94
75	Fast flexible electronics with strained silicon nanomembranes. <i>Scientific Reports</i> , <b>2013</b> , 3, 1291	4.9	86
74	Semiconductor nanomembrane tubes: three-dimensional confinement for controlled neurite outgrowth. <i>ACS Nano</i> , <b>2011</b> , 5, 2447-57	16.7	78
73	Nanomechanical architecture of semiconductor nanomembranes. <i>Nanoscale</i> , <b>2011</b> , 3, 96-120	7.7	71

72	High-fidelity resonant gating of a silicon-based quantum dot hybrid qubit. <i>Npj Quantum Information</i> , <b>2015</b> , 1,	8.6	66
71	Excitation of longitudinal and transverse coherent acoustic phonons in nanometer free-standing films of (001) Si. <i>Physical Review B</i> , <b>2009</b> , 79,	3.3	65
70	Strained-germanium nanostructures for infrared photonics. <i>ACS Nano</i> , <b>2014</b> , 8, 3136-51	16.7	63
69	Chemisorption: Island formation and adatom interactions. <i>Critical Reviews in Solid State and Materials Sciences</i> , <b>1978</b> , 7, 233-259	10.1	62
68	A method to obtain kinematic intensities from low-energy electron diffraction data. <i>Surface Science</i> , <b>1973</b> , 35, 117-144	1.8	62
67	Mechano-electronic superlattices in silicon nanoribbons. <i>ACS Nano</i> , <b>2009</b> , 3, 721-7	16.7	61
66	A surface-based approach to DNA computation. <i>Journal of Computational Biology</i> , <b>1998</b> , 5, 255-67	1.7	54
65	Si/Ge junctions formed by nanomembrane bonding. <i>ACS Nano</i> , <b>2011</b> , 5, 1179-89	16.7	47
64	Influence of surface chemical modification on charge transport properties in ultrathin silicon membranes. <i>ACS Nano</i> , <b>2009</b> , 3, 1683-92	16.7	47
63	The present status of low-energy electron diffraction. <i>Applications of Surface Science</i> , <b>1982</b> , 13, 260-281		44
62	Strain engineering and mechanical assembly of silicon/germanium nanomembranes. <i>Materials Science and Engineering Reports</i> , <b>2018</b> , 128, 1-31	30.9	42
61	Quantum confinement, surface roughness, and the conduction band structure of ultrathin silicon membranes. <i>ACS Nano</i> , <b>2010</b> , 4, 2466-74	16.7	32
60	State-conditional coherent charge qubit oscillations in a Si/SiGe quadruple quantum dot. <i>Npj Quantum Information</i> , <b>2016</b> , 2,	8.6	32
59	Exceptional charge transport properties of graphene on germanium. <i>ACS Nano</i> , <b>2014</b> , 8, 10237-45	16.7	31
58	Island-corner barrier effect in two-dimensional pattern formation at surfaces. <i>Physical Review B</i> , <b>2001</b> , 63,	3.3	28
57	Silicon Nanomembranes. <i>MRS Bulletin</i> , <b>2007</b> , 32, 57-63	3.2	26
56	Strain-engineered surface transport in Si(001): complete isolation of the surface state via tensile strain. <i>Physical Review Letters</i> , <b>2013</b> , 111, 246801	7.4	25
55	Defect-free single-crystal SiGe: a new material from nanomembrane strain engineering. <i>ACS Nano</i> , <b>2011</b> , 5, 5814-22	16.7	23

54	Nano-origami: Art and function. <i>Nano Today</i> , <b>2015</b> , 10, 538-541	17.9	20
53	Probing the electronic structure at semiconductor surfaces using charge transport in nanomembranes. <i>Nature Communications</i> , <b>2013</b> , 4, 1339	17.4	19
52	Strain engineered SiGe multiple-quantum-well nanomembranes for far-infrared intersubband device applications. <i>ACS Nano</i> , <b>2013</b> , 7, 2326-34	16.7	19
51	Passivation of Germanium by Graphene. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2017</b> , 9, 17629-17636	9.5	19
50	Straining nanomembranes via highly mismatched heteroepitaxial growth: InAs islands on compliant Si substrates. <i>ACS Nano</i> , <b>2012</b> , 6, 10287-95	16.7	18
49	Symmetry in strain engineering of nanomembranes: making new strained materials. <i>ACS Nano</i> , <b>2011</b> , 5, 5532-42	16.7	18
48	5. Diffraction Techniques. <i>Methods in Experimental Physics</i> , <b>1985</b> , 22, 237-298		18
47	Neurite guidance and three-dimensional confinement via compliant semiconductor scaffolds. <i>ACS Nano</i> , <b>2014</b> , 8, 12219-27	16.7	16
46	"Soft Si": effective stiffness of supported crystalline nanomembranes. <i>ACS Nano</i> , <b>2011</b> , 5, 5400-7	16.7	16
45	Conduction band structure and electron mobility in uniaxially strained Si via externally applied strain in nanomembranes. <i>Journal Physics D: Applied Physics</i> , <b>2011</b> , 44, 325107	3	16
44	Single-crystal silicon/silicon dioxide multilayer heterostructures based on nanomembrane transfer. <i>Applied Physics Letters</i> , <b>2007</b> , 90, 183107	3.4	16
43	Consequences of the reciprocity theorem in low-energy electron diffraction. <i>Surface Science</i> , <b>1971</b> , 25, 444-450	1.8	16
42	SiGe Nanomembrane Quantum-Well Infrared Photodetectors. <i>ACS Photonics</i> , <b>2016</b> , 3, 1978-1985	6.3	16
41	Influence of surface properties on the electrical conductivity of silicon nanomembranes. <i>Nanoscale Research Letters</i> , <b>2011</b> , 6, 402	5	15
40	Nanomechanical Architectures Mechanics-Driven Fabrication Based on Crystalline Membranes. <i>MRS Bulletin</i> , <b>2009</b> , 34, 190-195	3.2	15
39	Progress toward demonstration of a surface based DNA computation: a one word approach to solve a model satisfiability problem. <i>BioSystems</i> , <b>1999</b> , 52, 25-33	1.9	15
38	Grating-coupled mid-infrared light emission from tensilely strained germanium nanomembranes. <i>Applied Physics Letters</i> , <b>2013</b> , 103, 201114	3.4	14
37	Semiconductor nanomembranes: a platform for new properties via strain engineering. <i>Nanoscale Research Letters</i> , <b>2012</b> , 7, 628	5	13

36	Thermally Processed High-Mobility MOS Thin-Film Transistors on Transferable Single-Crystal Elastically Strain-Sharing Si/SiGe/Si Nanomembranes. <i>IEEE Transactions on Electron Devices</i> , <b>2008</b> , 55, 810-815	2.9	12
35	Computation with DNA on surfaces. <i>Surface Science</i> , <b>2002</b> , 500, 699-721	1.8	12
34	Distinct Nucleation and Growth Kinetics of Amorphous SrTiO on (001) SrTiO and SiO/Si: A Step toward New Architectures. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2017</b> , 9, 41034-41042	9.5	9
33	Facile Fabrication of Ordered Crystalline-Semiconductor Microstructures on Compliant Substrates. <i>Advanced Functional Materials</i> , <b>2014</b> , 24, 1730-1737	15.6	9
32	Effect of surface bonding on semiconductor nanoribbon wiggling structure. <i>Applied Physics Letters</i> , <b>2010</b> , 96, 111904	3.4	8
31	The power of surface-based DNA computation (extended abstract) <b>1997</b> ,		8
30	Photopatternable substrate-independent poly(glycidyl methacrylate-ran-2-(acryloyloxy) ethyl 2-methylacrylate) polymer films for immobilization of biomolecules. <i>Journal of Polymer Science Part A</i> , <b>2008</b> , 46, 5826-5838	2.5	8
29	Surface-based DNA computing operations: DESTROY and READOUT. <i>BioSystems</i> , <b>1999</b> , 52, 189-91	1.9	8
28	Passivation of Germanium by Graphene for Stable Graphene/Germanium Heterostructure Devices. <i>ACS Applied Nano Materials</i> , <b>2019</b> , 2, 4313-4322	5.6	7
27	Electronic Transport Properties of Epitaxial Si/SiGe Heterostructures Grown on Single-Crystal SiGe Nanomembranes. <i>ACS Nano</i> , <b>2015</b> , 9, 4891-9	16.7	7
26	Silicon nanomembranes as a means to evaluate stress evolution in deposited thin films. <i>Extreme Mechanics Letters</i> , <b>2014</b> , 1, 9-16	3.9	7
25	Spatial noise correlations in a Si/SiGe two-qubit device from Bell state coherences. <i>Physical Review B</i> , <b>2020</b> , 101,	3.3	6
24	Local-Wetting-Induced Deformation of Rolled-Up Si/Si-Ge Nanomembranes: A Potential Route for Remote Chemical Sensing. <i>IEEE Nanotechnology Magazine</i> , <b>2011</b> , 10, 21-25	2.6	6
23	Strain Engineered Silicon Nanomembranes. <i>Journal of Physics: Conference Series</i> , <b>2007</b> , 61, 652-657	0.3	6
22	Fundamental Mechanisms of Film Growth. <i>Semiconductors and Semimetals</i> , <b>1998</b> , 49-100	0.6	6
21	Flexible nanomembrane photonic-crystal cavities for tensilely strained-germanium light emission. <i>Applied Physics Letters</i> , <b>2016</b> , 108, 241107	3.4	6
20	Ultrawide strain-tuning of light emission from InGaAs nanomembranes. <i>Applied Physics Letters</i> , <b>2018</b> , 113, 201105	3.4	6
19	Observation of large multiple scattering effects in ultrafast electron diffraction on monocrystalline silicon. <i>Physical Review B</i> , <b>2018</b> , 97,	3.3	5

18	Heteroepitaxial growth on thin sheets and bulk material: exploring differences in strain relaxation via low-energy electron microscopy. <i>Journal Physics D: Applied Physics</i> , <b>2014</b> , 47, 025305	3	5
17	High-Ge-Content SiGe Alloy Single Crystals Using the Nanomembrane Platform. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2020</b> , 12, 20859-20866	9.5	5
16	Electronic Transport in Hydrogen-Terminated Si(001) Nanomembranes. <i>Physical Review Applied</i> , <b>2018</b> , 9,	4.3	4
15	Translation and manipulation of silicon nanomembranes using holographic optical tweezers. <i>Nanoscale Research Letters</i> , <b>2011</b> , 6, 507	5	4
14	Silicon Nanomembranes Incorporating Mixed Crystal Orientations. <i>ECS Transactions</i> , <b>2009</b> , 16, 215-218	1	4
13	Silicon Nanomembranes with Hybrid Crystal Orientations and Strain States. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2017</b> , 9, 42372-42382	9.5	2
12	Three-omega thermal-conductivity measurements with curved heater geometries. <i>Applied Physics Letters</i> , <b>2020</b> , 117, 073102	3.4	2
11	Self-Winding Helices as Slow-Wave Structures for Sub-Millimeter Traveling-Wave Tubes. <i>ACS Nano</i> , <b>2021</b> , 15, 1229-1239	16.7	2
10	Elastically Strain-Sharing Si(110) Nanomembranes. <i>ECS Transactions</i> , <b>2010</b> , 33, 813-821	1	1
9	Influence of Surface and Interface Properties on the Electrical Conductivity of Silicon Nanomembranes. <i>Advanced Materials Research</i> , <b>2011</b> , 383-390, 7220-7223	0.5	1
8	Flexible Microwave Single-Crystal Si TFTs with fmax of 5.5 GHz. <i>Device Research Conference, IEEE Annual</i> , <b>2007</b> ,		1
7	Strain-Induced Lateral Heterostructures in Patterned Semiconductor Nanomembranes for Micro- and Optoelectronics. <i>ACS Applied Nano Materials</i> , <b>2021</b> , 4, 6160-6169	5.6	0
6	Synchrotron x-ray thermal diffuse scattering probes for phonons in Si/SiGe/Si trilayer nanomembranes. <i>MRS Advances</i> , <b>2016</b> , 1, 3263-3268	0.7	
5	Strained Si-based Nanomembrane Materials. <i>Materials Research Society Symposia Proceedings</i> , <b>2006</b> , 958, 1		
4	Summary Abstract: Thermodynamics of overlayer ordering and epitaxy. <i>Journal of Vacuum Science and Technology</i> , <b>1982</b> , 21, 554-556		
3	A simple numerical method for evaluating heat dissipation from curved wires with periodic applied heating. <i>Applied Physics Letters</i> , <b>2021</b> , 119, 163501	3.4	
2	SELF-ORGANIZED ISLAND ARRAYS IN SiGe/Si MULTILAYERS. <i>Series on Directions in Condensed Matter Physics</i> , <b>1999</b> , 177-194		
1	Electronically Driven Structural Dynamics of Si Resolved by Femtosecond Electron Diffraction. <i>Springer Series in Chemical Physics</i> , <b>2009</b> , 158-160	0.3	

