

J Leon Shohet

List of Publications by Year in descending order

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58
papers

902
citations

471061

17
h-index

525886

27
g-index

59
all docs

59
docs citations

59
times ranked

790
citing authors

#	ARTICLE	IF	CITATIONS
1	Measurement of bandgap energies in low-k organosilicates. Journal of Applied Physics, 2014, 115, .	1.1	95
2	Plasma vacuum ultraviolet emission in an electron cyclotron resonance etcher. Applied Physics Letters, 1999, 74, 2599-2601.	1.5	45
3	Measurement of ion flows using an "unmagnetized" Mach probe in the interchangeable module stellarator. Review of Scientific Instruments, 1994, 65, 2599-2606.	0.6	43
4	Impact of VUV photons on SiO ₂ and organosilicate low-k dielectrics: General behavior, practical applications, and atomic models. Applied Physics Reviews, 2019, 6, .	5.5	38
5	Plasma-Generated OH Radical Production for Analyzing Three-Dimensional Structure in Protein Therapeutics. Scientific Reports, 2017, 7, 12946.	1.6	37
6	The effects of vacuum ultraviolet radiation on low-k dielectric films. Journal of Applied Physics, 2012, 112, .	1.1	35
7	Measuring vacuum ultraviolet radiation-induced damage. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2003, 21, 1253-1259.	0.9	34
8	Photoemission and conduction currents in vacuum ultraviolet irradiated aluminum oxide. Journal of Applied Physics, 2002, 91, 1242-1246.	1.1	33
9	Plasma damage effects on low-k porous organosilicate glass. Journal of Applied Physics, 2010, 108, .	1.1	32
10	Time-dependent dielectric breakdown of plasma-exposed porous organosilicate glass. Applied Physics Letters, 2012, 100, .	1.5	31
11	The effect of water uptake on the mechanical properties of low-k organosilicate glass. Journal of Applied Physics, 2013, 114, .	1.1	29
12	Charge Trapping within UV and Vacuum UV Irradiated Low-k Porous Organosilicate Dielectrics. Journal of the Electrochemical Society, 2010, 157, G177.	1.3	28
13	Defect-induced bandgap narrowing in low-k dielectrics. Applied Physics Letters, 2015, 107, 082903.	1.5	27
14	Memristive Behavior Enabled by Amorphous-Crystalline 2D Oxide Heterostructure. Advanced Materials, 2020, 32, e2000801.	11.1	26
15	Effects of plasma and vacuum-ultraviolet exposure on the mechanical properties of low-k porous organosilicate glass. Journal of Applied Physics, 2014, 116, .	1.1	23
16	Effect of vacuum ultraviolet and ultraviolet Irradiation on capacitance-voltage characteristics of low-k-porous organosilicate dielectrics. Applied Physics Letters, 2010, 96, .	1.5	22
17	In situ electrical characterization of dielectric thin films directly exposed to plasma vacuum-ultraviolet radiation. Journal of Applied Physics, 2000, 88, 1742-1746.	1.1	18
18	Reduced adhesion of human blood platelets to polyethylene tubing by microplasma surface modification. Journal of Applied Physics, 2004, 96, 4539-4546.	1.1	18

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19	Depletion of charge produced during plasma exposure in aluminum oxide by vacuum ultraviolet radiation. Applied Physics Letters, 2000, 77, 3914-3916.	1.5	17
20	Direct measurement of topography-dependent charging of patterned oxide/semiconductor structures. Applied Physics Letters, 2007, 91, .	1.5	17
21	Defects in low-k organosilicate glass and their response to processing as measured with electron-spin resonance. Applied Physics Letters, 2011, 98, .	1.5	16
22	Effects of vacuum ultraviolet radiation on deposited and ultraviolet-cured low-k porous organosilicate glass. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2011, 29, .	0.9	16
23	Effect of thermal annealing on charge exchange between oxygen interstitial defects within HfO ₂ and oxygen-deficient silicon centers within the SiO ₂ /Si interface. Applied Physics Letters, 2009, 94, .	1.5	14
24	Monte Carlo simulation of the effects of vacuum-ultraviolet radiation on dielectric materials. Applied Physics Letters, 2005, 86, 102101.	1.5	13
25	Effects of vacuum ultraviolet and ultraviolet irradiation on ultrathin hafnium-oxide dielectric layers on (100)Si as measured with electron-spin resonance. Applied Physics Letters, 2010, 96, .	1.5	13
26	Surface potential due to charge accumulation during vacuum ultraviolet exposure for high-k and low-k dielectrics. Applied Physics Letters, 2010, 97, .	1.5	13
27	Bandgap measurements of low-k porous organosilicate dielectrics using vacuum ultraviolet irradiation. Applied Physics Letters, 2014, 104, .	1.5	13
28	Numerical simulation of vacuum-ultraviolet irradiation of dielectric layers. Applied Physics Letters, 2010, 96, .	1.5	12
29	The nature of the defects generated from plasma exposure in pristine and ultraviolet-cured low-k organosilicate glass. Applied Physics Letters, 2011, 98, 252902.	1.5	12
30	Effect of vacuum ultraviolet and ultraviolet irradiation on mobile charges in the bandgap of low-k-porous organosilicate dielectrics. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2011, 29, .	0.9	11
31	Changes to Charge and Defects in Dielectrics from Ion and Photon Fluences during Plasma Exposure. Electrochemical and Solid-State Letters, 2011, 14, H107.	2.2	10
32	Reflectance and substrate currents of dielectric layers under vacuum ultraviolet irradiation. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2010, 28, 1316-1318.	0.9	9
33	The sine-Gordon equation in toroidal magnetic-fusion experiments. European Physical Journal: Special Topics, 2007, 147, 191-207.	1.2	8
34	The effects of plasma exposure and vacuum ultraviolet irradiation on photopatternable low-k dielectric materials. Journal of Applied Physics, 2013, 114, .	1.1	8
35	Effects of vacuum-ultraviolet irradiation on copper penetration into low-k dielectrics under bias-temperature stress. Applied Physics Letters, 2015, 106, 012904.	1.5	8
36	Vacuum-ultraviolet-induced charge depletion in plasma-charged patterned-dielectric wafers. Journal of Applied Physics, 2009, 105, .	1.1	7

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37	Effect of vacuum-ultraviolet irradiation on the dielectric constant of low-k organosilicate dielectrics. Applied Physics Letters, 2014, 105, .	1.5	7
38	Effects of neutron irradiation of ultra-thin HfO ₂ films. Applied Physics Letters, 2014, 104, .	1.5	6
39	Measurement of the vacuum-ultraviolet absorption spectrum of low-k dielectrics using X-ray reflectivity. Applied Physics Letters, 2018, 112, .	1.5	6
40	Plasma and vacuum ultraviolet induced charging of SiO ₂ and HfO ₂ patterned structures. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2012, 30, .	0.9	5
41	Time-dependent dielectric breakdown measurements of porous organosilicate glass using mercury and solid metal probes. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2014, 32, .	0.9	5
42	Fluorophore-based sensor for oxygen radicals in processing plasmas. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2015, 33, .	0.9	5
43	The effects of vacuum-ultraviolet radiation on defects in low-k organosilicate glass (SiCOH) as measured with electron-spin resonance. Thin Solid Films, 2016, 616, 23-26.	0.8	5
44	Effects of ultraviolet (UV) irradiation in air and under vacuum on low-k dielectrics. AIP Advances, 2016, 6, .	0.6	5
45	Measurements of Schottky barrier at the low-k SiOC:H/Cu interface using vacuum ultraviolet photoemission spectroscopy. Applied Physics Letters, 2015, 107, .	1.5	4
46	Effects of vacuum ultraviolet irradiation on trapped charges and leakage currents of low-k organosilicate dielectrics. Applied Physics Letters, 2015, 106, 192905.	1.5	4
47	Nonthermal combined ultraviolet and vacuum-ultraviolet curing process for organosilicate dielectrics. Applied Physics Letters, 2016, 108, .	1.5	3
48	Influence of porosity on electrical properties of low-k dielectrics irradiated with vacuum-ultraviolet radiation. Applied Physics Letters, 2016, 109, 122902.	1.5	3
49	Transmission of oxygen radicals through free-standing single-layer and multilayer silicon-nitride and silicon-dioxide films. Journal of Applied Physics, 2017, 122, 084101.	1.1	2
50	The effects of plasma-processing conditions on the morphology of adherent human blood platelets. Journal of Applied Physics, 2008, 103, 093302.	1.1	1
51	Equivalent-circuit model for vacuum ultraviolet irradiation of dielectric films. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2012, 30, 031505.	0.9	1
52	Surface photoconductivity of organosilicate glass dielectrics induced by vacuum-ultraviolet radiation. Journal of Applied Physics, 2013, 114, 064104.	1.1	1
53	Measuring the volume charge in dielectric films using single frequency electro-acoustic waves. Journal of Materials Research, 2014, 29, 501-508.	1.2	1
54	Effects of cesium ion-implantation on mechanical and electrical properties of organosilicate low-k films. Applied Physics Letters, 2016, 108, 202901.	1.5	1

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55	Effects of cesium ion implantation on the mechanical and electrical properties of porous SiCOH low-k dielectrics. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2017, 35, 061506.	0.9	1
56	Effect of frequency and applied voltage of an atmospheric-pressure dielectric-barrier discharge on breakdown and hydroxyl-radical generation with a liquid electrode. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2020, 38, .	0.9	1
57	Surface-directed differentiation of embryonic stem cells. <i>Applied Physics Letters</i> , 2008, 92, 193902.	1.5	0
58	The effect of vacuum ultraviolet irradiation on the time-dependent dielectric breakdown of organosilicate dielectrics. <i>Applied Physics Letters</i> , 2016, 109, 122905.	1.5	0