J Leon Shohet

List of Publications by Year in Descending Order

58 papers	744 citations	16 h-index	24 g-index
59 ext. papers	833 ext. citations	3.5 avg, IF	3.61 L-index

#	Paper	IF	Citations
58	Memristive Behavior Enabled by Amorphous-Crystalline 2D Oxide Heterostructure. *Advanced Materials*, **2020**, 32, e2000801	24	12
57	Effect of frequency and applied voltage of an atmospheric-pressure dielectric-barrier discharge on breakdown and hydroxyl-radical generation with a liquid electrode. *Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films*, **2020**, 38, 043001	2.9	
56	Impact of VUV photons on SiO2 and organosilicate low-k dielectrics: General behavior, practical applications, and atomic models. *Applied Physics Reviews*, **2019**, 6, 011301	17.3	23
55	Measurement of the vacuum-ultraviolet absorption spectrum of low-k dielectrics using X-ray reflectivity. *Applied Physics Letters*, **2018**, 112, 082902	3.4	3
54	Transmission of oxygen radicals through free-standing single-layer and multilayer silicon-nitride and silicon-dioxide films. *Journal of Applied Physics*, **2017**, 122, 084101	2.5	1
53	Plasma-Generated OH Radical Production for Analyzing Three-Dimensional Structure in Protein Therapeutics. *Scientific Reports*, **2017**, 7, 12946	4.9	17
52	Effects of cesium ion implantation on the mechanical and electrical properties of porous SiCOH low-k dielectrics. *Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films*, **2017**, 35, 061506	2.9	1
51	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	2.2	4
50	Effects of cesium ion-implantation on mechanical and electrical properties of organosilicate low-k films. *Applied Physics Letters*, **2016**, 108, 202901	3.4	1
49	Effects of ultraviolet (UV) irradiation in air and under vacuum on low-k dielectrics. *AIP Advances*, **2016**, 6, 075012	1.5	4
48	The effect of vacuum ultraviolet irradiation on the time-dependent dielectric breakdown of organosilicate dielectrics. *Applied Physics Letters*, **2016**, 109, 122905	3.4	
47	Nonthermal combined ultraviolet and vacuum-ultraviolet curing process for organosilicate dielectrics. *Applied Physics Letters*, **2016**, 108, 242906	3.4	3
46	Influence of porosity on electrical properties of low-k dielectrics irradiated with vacuum-ultraviolet radiation. *Applied Physics Letters*, **2016**, 109, 122902	3.4	3
45	Effects of vacuum ultraviolet irradiation on trapped charges and leakage currents of low-k organosilicate dielectrics. *Applied Physics Letters*, **2015**, 106, 192905	3.4	4
44	Effects of vacuum-ultraviolet irradiation on copper penetration into low-k dielectrics under bias-temperature stress. *Applied Physics Letters*, **2015**, 106, 012904	3.4	8
43	Measurements of Schottky barrier at the low-k SiOC:H/Cu interface using vacuum ultraviolet photoemission spectroscopy. *Applied Physics Letters*, **2015**, 107, 232905	3.4	4
42	Defect-induced bandgap narrowing in low-k dielectrics. *Applied Physics Letters*, **2015**, 107, 082903	3.4	25

41	Fluorophore-based sensor for oxygen radicals in processing plasmas. *Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films*, **2015**, 33, 061305	2.9	4
40	Measurement of bandgap energies in low-k organosilicates. *Journal of Applied Physics*, **2014**, 115, 094105	2.5	71
39	Effect of vacuum-ultraviolet irradiation on the dielectric constant of low-k organosilicate dielectrics. *Applied Physics Letters*, **2014**, 105, 202902	3.4	6
38	Effects of neutron irradiation of ultra-thin HfO2 films. *Applied Physics Letters*, **2014**, 104, 032910	3.4	5
37	Measuring the volume charge in dielectric films using single frequency electro-acoustic waves. *Journal of Materials Research*, **2014**, 29, 501-508	2.5	1
36	Bandgap measurements of low-k porous organosilicate dielectrics using vacuum ultraviolet irradiation. *Applied Physics Letters*, **2014**, 104, 062904	3.4	13
35	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, 051509	2.9	4
34	Effects of plasma and vacuum-ultraviolet exposure on the mechanical properties of low-k porous organosilicate glass. *Journal of Applied Physics*, **2014**, 116, 044103	2.5	20
33	The effect of water uptake on the mechanical properties of low-k organosilicate glass. *Journal of Applied Physics*, **2013**, 114, 084103	2.5	27
32	The effects of plasma exposure and vacuum ultraviolet irradiation on photopatternable low-k dielectric materials. *Journal of Applied Physics*, **2013**, 114, 104107	2.5	8
31	Surface photoconductivity of organosilicate glass dielectrics induced by vacuum-ultraviolet radiation. *Journal of Applied Physics*, **2013**, 114, 064104	2.5	1
30	The effects of vacuum ultraviolet radiation on low-k dielectric films. *Journal of Applied Physics*, **2012**, 112, 111101	2.5	31
29	Time-dependent dielectric breakdown of plasma-exposed porous organosilicate glass. *Applied Physics Letters*, **2012**, 100, 112905	3.4	27
28	Plasma and vacuum ultraviolet induced charging of SiO2 and HfO2 patterned structures. *Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films*, **2012**, 30, 01A109	2.9	4
27	Equivalent-circuit model for vacuum ultraviolet irradiation of dielectric films. *Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films*, **2012**, 30, 031505	2.9	1
26	Defects in low-k organosilicate glass and their response to processing as measured with electron-spin resonance. *Applied Physics Letters*, **2011**, 98, 102903	3.4	15
25	Changes to Charge and Defects in Dielectrics from Ion and Photon Fluences during Plasma Exposure. *Electrochemical and Solid-State Letters*, **2011**, 14, H107		6
24	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, 010601	2.9	10

23	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, 030602	2.9	14
22	The nature of the defects generated from plasma exposure in pristine and ultraviolet-cured low-k organosilicate glass. *Applied Physics Letters*, **2011**, 98, 252902	3.4	12
21	Charge Trapping within UV and Vacuum UV Irradiated Low-k Porous Organosilicate Dielectrics. *Journal of the Electrochemical Society*, **2010**, 157, G177	3.9	26
20	Plasma damage effects on low-k porous organosilicate glass. *Journal of Applied Physics*, **2010**, 108, 094110	2.5	28
19	Effect of vacuum ultraviolet and ultraviolet Irradiation on capacitance-voltage characteristics of low-k-porous organosilicate dielectrics. *Applied Physics Letters*, **2010**, 96, 052901	3.4	18
18	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, 192904	3.4	10
17	Surface potential due to charge accumulation during vacuum ultraviolet exposure for high-k and low-k dielectrics. *Applied Physics Letters*, **2010**, 97, 072901	3.4	11
16	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	2.9	9
15	Numerical simulation of vacuum-ultraviolet irradiation of dielectric layers. *Applied Physics Letters*, **2010**, 96, 142903	3.4	12
14	Vacuum-ultraviolet-induced charge depletion in plasma-charged patterned-dielectric wafers. *Journal of Applied Physics*, **2009**, 105, 053308	2.5	7
13	Effect of thermal annealing on charge exchange between oxygen interstitial defects within HfO2 and oxygen-deficient silicon centers within the SiO2/Si interface. *Applied Physics Letters*, **2009**, 94, 162907	3.4	12
12	Surface-directed differentiation of embryonic stem cells. *Applied Physics Letters*, **2008**, 92, 193902	3.4	
11	The effects of plasma-processing conditions on the morphology of adherent human blood platelets. *Journal of Applied Physics*, **2008**, 103, 093302	2.5	1
10	The sine-Gordon equation in toroidal magnetic-fusion experiments. *European Physical Journal: Special Topics*, **2007**, 147, 191-207	2.3	8
9	Direct measurement of topography-dependent charging of patterned oxide/semiconductor structures. *Applied Physics Letters*, **2007**, 91, 182108	3.4	15
8	Monte Carlo simulation of the effects of vacuum-ultraviolet radiation on dielectric materials. *Applied Physics Letters*, **2005**, 86, 102101	3.4	13
7	Reduced adhesion of human blood platelets to polyethylene tubing by microplasma surface modification. *Journal of Applied Physics*, **2004**, 96, 4539-4546	2.5	17
6	Measuring vacuum ultraviolet radiation-induced damage. *Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films*, **2003**, 21, 1253-1259	2.9	26

5	Photoemission and conduction currents in vacuum ultraviolet irradiated aluminum oxide. *Journal of Applied Physics*, **2002**, 91, 1242-1246	2.5	26
4	In situ electrical characterization of dielectric thin films directly exposed to plasma vacuum-ultraviolet radiation. *Journal of Applied Physics*, **2000**, 88, 1742-1746	2.5	15
3	Depletion of charge produced during plasma exposure in aluminum oxide by vacuum ultraviolet radiation. *Applied Physics Letters*, **2000**, 77, 3914-3916	3.4	13
2	Plasma vacuum ultraviolet emission in an electron cyclotron resonance etcher. *Applied Physics Letters*, **1999**, 74, 2599-2601	3.4	40
1	Measurement of ion flows using an "unmagnetized" Mach probe in the interchangeable module stellarator. *Review of Scientific Instruments*, **1994**, 65, 2599-2606	1.7	40