Valeri V Afanas ev

List of Publications by Year in Descending Order

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

331 papers	8,729 citations	48 h-index	78 g-index
346 ext. papers	9,489 ext. citations	2.8 avg, IF	6.04 L-index

#	Paper	IF	Citations
331	Electron trapping in ferroelectric HfO2. *Physical Review Materials*, **2021**, 5,	3.2	3
330	Processing Stability of Monolayer WS2 on SiO2. *Nano Express*, **2021**, 2, 024004	2	1
329	Internal photoemission of electrons from 2D semiconductor/3D metal barrier structures. *Journal Physics D: Applied Physics*, **2021**, 54, 295101	3	0
328	Efficient Direct Band-Gap Transition in Germanium by Three-Dimensional Strain. *ACS Applied Materials & Interfaces*, **2021**, 13, 30941-30949	9.5	3
327	Two dimensional V2O3 and its experimental feasibility as robust room-temperature magnetic Chern insulator. *Npj 2D Materials and Applications*, **2021**, 5,	8.8	3
326	Doping-induced ferromagnetism in InSe and SnO monolayers. *Journal of Computational Electronics*, **2021**, 20, 88-94	1.8	2
325	Metal induced charge transfer doping in graphene-ruthenium hybrid interconnects. *Carbon*, **2021**, 183, 999-1011	10.4	1
324	Band alignment at interfaces of two-dimensional materials: internal photoemission analysis. *Journal of Physics Condensed Matter*, **2020**, 32, 413002	1.8	4
323	Analysis of Oxygen and Nitrogen Redistribution at Interfaces of HfO2 with Laminate TiN/TiAl/TiN Electrodes. *Journal of Physical Chemistry C*, **2020**, 124, 16171-16176	3.8	3
322	Mechanisms of TiN Effective Workfunction Tuning at Interfaces with HfO2 and SiO2. *Journal of Physical Chemistry C*, **2020**, 124, 15547-15557	3.8	8
321	Variations of paramagnetic defects and dopants in geo-MoS from diverse localities probed by ESR. *Journal of Chemical Physics*, **2020**, 152, 234702	3.9	2
320	Ovonic Threshold-Switching GexSey Chalcogenide Materials: Stoichiometry, Trap Nature, and Material Relaxation from First Principles. *Physica Status Solidi - Rapid Research Letters*, **2020**, 14, 1900672	2.5	20
319	Analysis of Transferred MoS2 Layers Grown by MOCVD: Evidence of Mo Vacancy Related Defect Formation. *ECS Journal of Solid State Science and Technology*, **2020**, 9, 093001	2	5
318	Ferromagnetism and half-metallicity in two-dimensional MO (M=Ga,In) monolayers induced by hole doping. *Physical Review Materials*, **2020**, 4,	3.2	5
317	Energy Band Alignment of Few-Monolayer WS2 and WSe2 with SiO2 Using Internal Photoemission Spectroscopy. *ECS Journal of Solid State Science and Technology*, **2020**, 9, 093009	2	3
316	Two-dimensional gallium and indium oxides from global structure searching: Ferromagnetism and half metallicity via hole doping. *Journal of Applied Physics*, **2020**, 128, 034304	2.5	4
315	Defect profiling in FEFET Si:HfO2 layers. *Applied Physics Letters*, **2020**, 117, 203504	3.4	8

314	Contact resistance at 2D metal/semiconductor heterostructures. *Frontiers of Nanoscience*, **2020**, 17, 127-140	0.7	
313	Dangling bond defects in silicon-passivated strained-Si1−xGex channel layers. *Journal of Materials Science: Materials in Electronics*, **2020**, 31, 75-79	2.1	
312	Evaluation of the effective work-function of monolayer graphene on silicon dioxide by internal photoemission spectroscopy. *Thin Solid Films*, **2019**, 674, 39-43	2.2	3
311	Thermal stability and temperature dependent electron spin resonance characteristics of the As acceptor in geological 2H-MoS2. *Semiconductor Science and Technology*, **2019**, 34, 035022	1.8	2
310	Energy Band Alignment of a Monolayer MoS2 with SiO2 and Al2O3 Insulators from Internal Photoemission. *Physica Status Solidi (A) Applications and Materials Science*, **2019**, 216, 1800616	1.6	9
309	Determination of energy thresholds of electron excitations at semiconductor/insulator interfaces using trap-related displacement currents. *Microelectronic Engineering*, **2019**, 215, 110992	2.5	3
308	Contact resistance at graphene/MoS2 lateral heterostructures. *Applied Physics Letters*, **2019**, 114, 163101	3.4	9
307	A Sensitivity Map-Based Approach to Profile Defects in MIM Capacitors From ${I}$ –${V}$, ${C}$ – ${V}$, and ${G}$ – *IEEE Transactions on Electron Devices*, **2019**, 66, 1892-1898	2.9	11
306	Inhibition of Oxygen Scavenging by TiN at the TiN/SiO2 Interface by Atomic-Layer-Deposited Al2O3 Protective Interlayer. *Journal of Physical Chemistry C*, **2019**, 123, 22335-22344	3.8	9
305	Material-Selective Doping of 2D TMDC through AlO Encapsulation. *ACS Applied Materials & Interfaces*, **2019**, 11, 42697-42707	9.5	26
304	Contact Resistance at MoS2-Based 2D Metal/Semiconductor Lateral Heterojunctions. *ACS Applied Nano Materials*, **2019**, 2, 760-766	5.6	9
303	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
302	The origin of negative charging in amorphous AlO films: the role of native defects. *Nanotechnology*, **2019**, 30, 205201	3.4	32
301	Impact of MoS layer transfer on electrostatics of MoS/SiO interface. *Nanotechnology*, **2019**, 30, 055702	3.4	10
300	Defect localization of metal interconnection lines in 3-dimensional through-silicon-via structures by differential scanning photocapacitance microscopy. *Applied Physics Letters*, **2018**, 112, 071904	3.4	4
299	Intrinsic electron trapping in amorphous oxide. *Nanotechnology*, **2018**, 29, 125703	3.4	19
298	Intrinsic charge trapping in amorphous oxide films: status and challenges. *Journal of Physics Condensed Matter*, **2018**, 30, 233001	1.8	33
297	Silicene on non-metallic substrates: Recent theoretical and experimental advances. *Nano Research*, **2018**, 11, 1169-1182	10	21

296	Internal Photoemission Metrology of Inhomogeneous Interface Barriers. *Physica Status Solidi (A) Applications and Materials Science*, **2018**, 215, 1700865	1.6	13
295	Band alignment at interfaces of synthetic few-monolayer MoS2 with SiO2 from internal photoemission. *APL Materials*, **2018**, 6, 026801	5.7	15
294	Control of TiN oxidation upon atomic layer deposition of oxides. *Physical Chemistry Chemical Physics*, **2018**, 20, 27975-27982	3.6	9
293	Advances in SiCN-SiCN Bonding with High Accuracy Wafer-to-Wafer (W2W) Stacking Technology **2018**,		9
292	Hole-Doped 2D InSe for Spintronic Applications. *ACS Applied Nano Materials*, **2018**, 1, 6656-6665	5.6	23
291	Two-Dimensional Crystal Grain Size Tuning in WS2 Atomic Layer Deposition: An Insight in the Nucleation Mechanism. *Chemistry of Materials*, **2018**, 30, 7648-7663	9.6	32
290	Ferromagnetism in two-dimensional hole-doped SnO. *AIP Advances*, **2018**, 8, 055010	1.5	11
289	Correlation of Bandgap Reduction with Inversion Response in (Si)GeSn/High-k/Metal Stacks. *ACS Applied Materials & Interfaces*, **2017**, 9, 9102-9109	9.5	6
288	Paramagnetic Intrinsic Defects in Polycrystalline Large-Area 2D MoS Films Grown on SiO by Mo Sulfurization. *Nanoscale Research Letters*, **2017**, 12, 283	5	12
287	Oxidation-induced electron barrier enhancement at interfaces of Ge-based semiconductors (Ge, Ge1□Snx, SiyGe1□□Snx) with Al2O3. *Microelectronic Engineering*, **2017**, 178, 141-144	2.5	1
286	Interactions of hydrogen with amorphous hafnium oxide. *Physical Review B*, **2017**, 95,	3.3	17
285	Intrinsic point defects in buckled and puckered arsenene: a first-principles study. *Physical Chemistry Chemical Physics*, **2017**, 19, 9862-9871	3.6	36
284	ESR identification of the nitrogen acceptor in 2H-polytype synthetic MoS2: Dopant level and activation. *AIP Advances*, **2017**, 7, 105006	1.5	10
283	Leakage current induced by surfactant residues in self-assembly based ultralow-k dielectric materials. *Applied Physics Letters*, **2017**, 111, 032908	3.4	7
282	Re-distribution of oxygen at the interface between □AlO and TiN. *Scientific Reports*, **2017**, 7, 4541	4.9	27
281	The lead acceptor in p-type natural 2H-polytype MoS crystals evidenced by electron paramagnetic resonance. *Journal of Physics Condensed Matter*, **2017**, 29, 08LT01	1.8	7
280	Deep electron and hole polarons and bipolarons in amorphous oxide. *Physical Review B*, **2016**, 94,	3.3	35
279	Impact of Point Defects and Oxidation on the Electronic Properties of HfS2Monolayers. *ECS Journal of Solid State Science and Technology*, **2016**, 5, Q3054-Q3059	2	8

278	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
277	Oxygen and hydroxyl adsorption on MS2 (M = Mo, W, Hf) monolayers: a first-principles molecular dynamics study. *Physica Status Solidi - Rapid Research Letters*, **2016**, 10, 787-791	2.5	7
276	Low leakage stoichiometric SrTiO3 dielectric for advanced metal–insulator–metal capacitors. *Physica Status Solidi - Rapid Research Letters*, **2016**, 10, 420-425	2.5	5
275	Modulation of the Schottky Barrier Height for CMOS advanced contacts. *Microelectronic Engineering*, **2016**, 156, 82-85	2.5	1
274	Hydrogen induced dipole at the Pt/oxide interface in MOS devices. *Physica Status Solidi (A) Applications and Materials Science*, **2016**, 213, 260-264	1.6	4
273	Valence Band Profile in Two-Dimensional Silicon-Oxygen Superlattices Probed by Internal Photoemission. *ECS Journal of Solid State Science and Technology*, **2016**, 5, Q3008-Q3011	2	3
272	Impact of point defects on the electronic and transport properties of silicene nanoribbons. *Journal of Physics Condensed Matter*, **2016**, 28, 035302	1.8	20
271	Functional silicene and stanene nanoribbons compared to graphene: electronic structure and transport. *2D Materials*, **2016**, 3, 015001	5.9	16
270	Conduction barrier offset engineering for DRAM capacitor scaling. *Solid-State Electronics*, **2016**, 115, 133-139	1.7	31
269	Controlled Sulfurization Process for the Synthesis of Large Area MoS2 Films and MoS2/WS2 Heterostructures. *Advanced Materials Interfaces*, **2016**, 3, 1500635	4.6	53
268	Electron energy distribution in Si/TiN and Si/Ru hybrid floating gates with hafnium oxide based insulators for charge trapping memory devices. *Physica Status Solidi (A) Applications and Materials Science*, **2016**, 213, 265-269	1.6	1
267	Low leakage ZrO2 based capacitors for sub 20 nm dynamic random access memory technology nodes. *Journal of Applied Physics*, **2016**, 119, 064101	2.5	19
266	Characterization of a n+3C/n−4H SiC heterojunction diode. *Applied Physics Letters*, **2016**, 108, 143502	3.4	10
265	Intrinsic electron traps in atomic-layer deposited HfO2 insulators. *Applied Physics Letters*, **2016**, 108, 222901	3.4	32
264	ESR study of p-type natural 2H-polytype MoS2 crystals: The As acceptor activity. *Applied Physics Letters*, **2016**, 109, 172104	3.4	13
263	Band offsets and trap-related electron transitions at interfaces of (100)InAs with atomic-layer deposited Al2O3. *Journal of Applied Physics*, **2016**, 120, 235701	2.5	5
262	Saturation Photo-Voltage Methodology for Semiconductor/Insulator Interface Trap Spectroscopy. *ECS Journal of Solid State Science and Technology*, **2016**, 5, P3031-P3036	2	2
261	Metallization-Induced Oxygen Deficiency of Al2O3 Layers. *Journal of Physical Chemistry C*, **2016**, 120, 8979-8985	3.8	9

260	Ultra-thin ZrO2/SrO/ZrO2 insulating stacks for future dynamic random access memory capacitor applications. *Journal of Applied Physics*, **2015**, 117, 224102	2.5	14
259	Hole trapping at hydrogenic defects in amorphous silicon dioxide. *Microelectronic Engineering*, **2015**, 147, 141-144	2.5	9
258	Band alignment at interfaces of few-monolayer MoS2 with SiO2 and HfO2. *Microelectronic Engineering*, **2015**, 147, 294-297	2.5	27
257	Band alignment and effective work function of atomic-layer deposited VO2 and V2O5 films on SiO2 and Al2O3. *Physica Status Solidi C: Current Topics in Solid State Physics*, **2015**, 12, 238-241		5
256	Theoretical models of hydrogen-induced defects in amorphous silicon dioxide. *Physical Review B*, **2015**, 92,	3.3	43
255	Defect-induced bandgap narrowing in low-k dielectrics. *Applied Physics Letters*, **2015**, 107, 082903	3.4	25
254	Interaction of silicene and germanene with non-metallic substrates. *Journal of Physics: Conference Series*, **2015**, 574, 012015	0.3	4
253	Hydrogen-induced rupture of strained Si-O bonds in amorphous silicon dioxide. *Physical Review Letters*, **2015**, 114, 115503	7.4	61
252	Schottky barrier height engineering for next generation DRAM capacitors **2015**,		1
251	Effect of Binder Content in CuInSe Precursor Ink on the Physical and Electrical Properties of Printed CuInSe2 Solar Cells. *Journal of Physical Chemistry C*, **2014**, 118, 27201-27209	3.8	8
250	Modulation of electron barriers between TiNx and oxide insulators (SiO2, Al2O3) using Ti interlayer. *Physica Status Solidi (A) Applications and Materials Science*, **2014**, 211, 382-388	1.6	2
249	Leakage Control in 0.4-nm EOT Ru/SrTiOx/Ru Metal-Insulator-Metal Capacitors: Process Implications. *IEEE Electron Device Letters*, **2014**, 35, 753-755	4.4	22
248	Generation of Si dangling bond defects at Si/insulator interfaces induced by oxygen scavenging. *Physica Status Solidi (B): Basic Research*, **2014**, 251, 2193-2196	1.3	3
247	Charge transition level of GePb1 centers at interfaces of SiO2/GexSi1/SiO2 heterostructures investigated by positron annihilation spectroscopy. *Physica Status Solidi (B): Basic Research*, **2014**, 251, 2211-2215	1.3	1
246	The origin of white luminescence from silicon oxycarbide thin films. *Applied Physics Letters*, **2014**, 104, 061906	3.4	33
245	Near-interfacial thermal donor generation during processing of (100)Si/low-Si-oxycarbide insulator structures revealed by electron spin resonance. *Semiconductor Science and Technology*, **2014**, 29, 095008	1.8	
244	Influence of metal electrode stoichiometry on the electron barrier height at CuxTe1/Al2O3 interfaces for CBRAM applications. *Microelectronic Engineering*, **2014**, 120, 9-12	2.5	3
243	Processing-induced near-interfacial thermal donor generation in (100)Si/Si-oxycarbide insulator structures revealed by electron spin resonance. *Physica Status Solidi C: Current Topics in Solid State Physics*, **2014**, 11, 1574-1577		

242	Electron Band Alignment at Interfaces of Semiconductors with Insulating Oxides: An Internal Photoemission Study. *Advances in Condensed Matter Physics*, **2014**, 2014, 1-30	1	33
241	(Invited) Spectroscopy of Deep Gap States in High-k Insulators. *ECS Transactions*, **2014**, 64, 17-22	1	15
240	(Invited) High-k Dielectrics and High Work Function Metals for Hybrid Floating Gate NAND Flash Applications. *ECS Transactions*, **2014**, 61, 281-291	1	2
239	Hydrogen interaction kinetics of Ge dangling bonds at the Si0.25Ge0.75/SiO2 interface. *Journal of Applied Physics*, **2014**, 116, 044501	2.5	6
238	Band alignment at interfaces of amorphous Al2O3 with Ge1−xSnx- and strained Ge-based channels. *Applied Physics Letters*, **2014**, 104, 202107	3.4	4
237	Current–voltage characteristics of armchair Sn nanoribbons. *Physica Status Solidi - Rapid Research Letters*, **2014**, 8, 931-934	2.5	9
236	On the bipolar resistive-switching characteristics of Al2O3- and HfO2-based memory cells operated in the soft-breakdown regime. *Journal of Applied Physics*, **2014**, 116, 134502	2.5	21
235	Nature of intrinsic and extrinsic electron trapping in SiO2. *Physical Review B*, **2014**, 89,	3.3	71
234	Nature of the filament formed in HfO2-based resistive random access memory. *Thin Solid Films*, **2013**, 533, 15-18	2.2	27
233	Identification of intrinsic electron trapping sites in bulk amorphous silica from ab initio calculations. *Microelectronic Engineering*, **2013**, 109, 68-71	2.5	31
232	Considerations for further scaling of metal–insulator–metal DRAM capacitors. *Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics*, **2013**, 31, 01A105	1.3	13
231	(Invited) Theoretical Study of Silicene and Germanene. *ECS Transactions*, **2013**, 53, 51-62	1	8
230	Control of metal/oxide electron barriers in CBRAM cells by low work-function liners. *Microelectronic Engineering*, **2013**, 109, 156-159	2.5	15
229	Multi-frequency electron spin resonance analysis of interfacial Ge dangling bond defects in condensation-grown (1 0 0)Si/SiO2/Si1−xGex/SiO2. *Semiconductor Science and Technology*, **2013**, 28, 015003	1.8	
228	High-resolution electron spin resonance analysis of ion bombardment induced defects in advanced low-κ insulators (κ = 2.0-2.5). *Applied Physics Letters*, **2013**, 102, 172908	3.4	13
227	An electric field tunable energy band gap at silicene/(0001) ZnS interfaces. *Physical Chemistry Chemical Physics*, **2013**, 15, 3702-5	3.6	82
226	(Invited) Optimization of WAl2O3Cu(-Te) Material Stack for High-Performance Conductive-Bridging Memory Cells. *ECS Transactions*, **2013**, 58, 175-180	1	1
225	(Invited) Electron Band Alignment at Ge/Oxide and AIII-BV/Oxide Interfaces from Internal Photoemission Experiments. *ECS Transactions*, **2013**, 58, 311-316	1	2

224	Tunneling of holes is observed by second-harmonic generation. *Applied Physics Letters*, **2013**, 102, 082104	3.4	3
223	Thermally induced degradation of condensation-grown (100)Ge0.75Si0.25/SiO2 interfaces revealed by electron spin resonance. *Applied Physics Letters*, **2013**, 102, 122104	3.4	3
222	Comment on "A model for internal photoemission at high-k oxide/silicon energy barriers" [J. Appl. Phys. 112, 064115 (2012)]. *Journal of Applied Physics*, **2013**, 113, 166101	2.5	7
221	AsGa+ antisites identified by electron spin resonance as a main interface defect system in thermal GaAs/native oxide structures. *Applied Physics Letters*, **2013**, 103, 162111	3.4	15
220	Gadolinium -niobates and -tantalates: Amorphous High-k Materials by Aqueous CSD. *Journal of the Electrochemical Society*, **2012**, 159, G75-G79	3.9	5
219	The VO2 interface, the metal-insulator transition tunnel junction, and the metal-insulator transition switch On-Off resistance. *Journal of Applied Physics*, **2012**, 112, 124501	2.5	42
218	Correlation between interface traps and paramagnetic defects in c-Si/a-Si:H heterojunctions. *Applied Physics Letters*, **2012**, 100, 142101	3.4	13
217	Interface barriers at the interfaces of polar GaAs(111) faces with Al2O3. *Applied Physics Letters*, **2012**, 100, 141602	3.4	8
216	Semiconducting-like filament formation in TiN/HfO2/TiN resistive switching random access memories. *Applied Physics Letters*, **2012**, 100, 142102	3.4	42
215	High-k Insulating Films on Semiconductors and Metals: General Trends in Electron Band Alignment **2012**, 273-292		
214	Electron spin resonance features of the Ge Pb1 dangling bond defect in condensation-grown (100)Si/SiO2/Si1−xGex/SiO2 heterostructures. *Journal of Applied Physics*, **2012**, 112, 074501	2.5	7
213	Second-harmonic generation reveals the oxidation steps in semiconductor processing. *Journal of Applied Physics*, **2012**, 111, 064504	2.5	3
212	Second-harmonic generation as characterization tool for Ge/high-k dielectric interfaces **2012**,		2
211	Electron band alignment at the interface of (100)InSb with atomic-layer deposited Al2O3. *Applied Physics Letters*, **2012**, 101, 082114	3.4	10
210	Charge instability of atomic-layer deposited TaSiOx insulators on Si, InP, and In0.53Ga0.47As. *Applied Physics Letters*, **2012**, 100, 202104	3.4	5
209	Direct physical evidence of mechanisms of leakage and equivalent oxide thickness reduction in metal-insulator-metal capacitors based on RuOx/TiOx/SrxTiyOz/TiN stacks. *Applied Physics Letters*, **2012**, 101, 042901	3.4	12
208	Internal Photoemission at Interaces of ALD TaiOxInsulating Layers Deposited on Si, InP and In0.53Ga0.47As. *IOP Conference Series: Materials Science and Engineering*, **2012**, 41, 012019	0.4	1
207	Electron spin resonance study of point defects in thermal GaAs/GaAs-oxide structures. *IOP Conference Series: Materials Science and Engineering*, **2012**, 41, 012021	0.4	

206	The effect of composition on the bandgap width in insulating NbxTayOznanolayers. *IOP Conference Series: Materials Science and Engineering*, **2012**, 41, 012004	0.4	
205	Electron Trap Energy Distribution in ALD Al2O3, LaAl4Ox, and GdyAl2-yO3Layers on Silicon. *IOP Conference Series: Materials Science and Engineering*, **2012**, 41, 012008	0.4	6
204	Electronic properties of hydrogenated silicene and germanene. *Applied Physics Letters*, **2011**, 98, 223107	3.4	328
203	Universal stress-defect correlation at (100)semiconductor/oxide interfaces. *Applied Physics Letters*, **2011**, 98, 141901	3.4	10
202	TiNx/HfO2 interface dipole induced by oxygen scavenging. *Applied Physics Letters*, **2011**, 98, 132901	3.4	33
201	Electronic Properties of Silicene: Insights from First-Principles Modeling. *Journal of the Electrochemical Society*, **2011**, 158, H107	3.9	36
200	Multifrequency ESR analysis of theE□? defect in a-SiO2. *Physical Review B*, **2011**, 83,	3.3	12
199	Band Alignment at Interfaces of Oxide Insulators with Semiconductors. *Integrated Ferroelectrics*, **2011**, 125, 53-60	0.8	5
198	Multi-frequency ESR analysis of the E? □defect hyperfine structure in SiO 2 glasses. *Europhysics Letters*, **2011**, 93, 16002	1.6	4
197	Transitivity of band offsets between semiconductor heterojunctions and oxide insulators. *Applied Physics Letters*, **2011**, 99, 172101	3.4	20
196	Paramagnetic Pb-type interface defects in thermal (110)Si/SiO2. *Applied Physics Letters*, **2011**, 98, 213503	3.4	3
195	Mechanisms of Schottky Barrier Control on n-Type Germanium Using Ge3N4 Interlayers. *Journal of the Electrochemical Society*, **2011**, 158, H358	3.9	35
194	Inelastic electron tunneling spectroscopy of HfO2 gate stacks: A study based on first-principles modeling. *Applied Physics Letters*, **2011**, 99, 132101	3.4	
193	Band offsets at the (100)GaSb/Al2O3 interface from internal electron photoemission study. *Microelectronic Engineering*, **2011**, 88, 1050-1053	2.5	7
192	Inherent Si dangling bond defects at the thermal (110)Si/SiO2 interface. *Physical Review B*, **2011**, 84,	3.3	27
191	Interface state energy distribution and Pb defects at Si(110)/SiO2 interfaces: Comparison to (111) and (100) silicon orientations. *Journal of Applied Physics*, **2011**, 109, 013710	2.5	52
190	Impact of bottom electrode and SrxTiyOz film formation on physical and electrical properties of metal-insulator-metal capacitors. *Applied Physics Letters*, **2011**, 98, 182902	3.4	22
189	GaSb molecular beam epitaxial growth on p-InP(001) and passivation with in situ deposited Al2O3 gate oxide. *Journal of Applied Physics*, **2011**, 109, 073719	2.5	37

188	First-principles study of Ge dangling bonds in GeO2 and correlation with electron spin resonance at Ge/GeO2 interfaces. *Applied Physics Letters*, **2011**, 99, 212103	3.4	10
187	Influence of Al2O3 crystallization on band offsets at interfaces with Si and TiNx. *Applied Physics Letters*, **2011**, 99, 072103	3.4	40
186	Electron band alignment at the interface of (100)GaSb with molecular-beam deposited Al2O3. *Applied Physics Letters*, **2011**, 98, 072102	3.4	6
185	Structural and vibrational properties of amorphous GeO2 from first-principles. *Applied Physics Letters*, **2011**, 98, 202110	3.4	4
184	Electronic structure of NiO layers grown on Al2O3 and SiO2 using metallo-organic chemical vapour deposition. *Journal of Applied Physics*, **2011**, 110, 113724	2.5	4
183	Defects in Low-k Insulators (□2.5 □2.0): ESR Analysis and Charge Injection. *Materials Research Society Symposia Proceedings*, **2011**, 1335, 119		2
182	Lanthanide Aluminates as Dielectrics for Non-Volatile Memory Applications: Material Aspects. *Journal of the Electrochemical Society*, **2011**, 158, H778	3.9	7
181	Injection and trapping of electrons in Y2O3layers on Si. *IOP Conference Series: Materials Science and Engineering*, **2010**, 8, 012028	0.4	1
180	Detection and Electrical Characterization of Defects at the SiO2/4H-SiC Interface. *Materials Science Forum*, **2010**, 645-648, 463-468	0.4	9
179	Electron energy band alignment at the NiO/SiO2 interface. *Applied Physics Letters*, **2010**, 96, 172105	3.4	5
178	Comparative electron spin resonance study of epi-Lu2O3/(111)Si and a-Lu2O3/(100)Si interfaces: Misfit point defects. *Journal of Applied Physics*, **2010**, 107, 094502	2.5	3
177	Impact of crystallization behavior of SrxTiyOz films on electrical properties of metal-insulator-metal capacitors with TiN electrodes. *Applied Physics Letters*, **2010**, 97, 162906	3.4	23
176	Electron energy band alignment at the (100)Si/MgO interface. *Applied Physics Letters*, **2010**, 96, 052103	3.4	8
175	Electronic Properties of Silicene: Insights from First-Principles Modelling. *ECS Transactions*, **2010**, 33, 185-193	1	6
174	(Invited) Introducing Lanthanide Aluminates as Dielectrics for Nonvolatile Memory Applications: A Material Scientist's View. *ECS Transactions*, **2010**, 33, 31-42	1	6
173	Non-linear dielectric constant increase with Ti composition in high-k ALD-HfTiOxfilms after O2crystallization annealing. *IOP Conference Series: Materials Science and Engineering*, **2010**, 8, 012023	0.4	4
172	Can silicon behave like graphene? A first-principles study. *Applied Physics Letters*, **2010**, 97, 112106	3.4	197
171	Electron band alignment between (100)InP and atomic-layer deposited Al2O3. *Applied Physics Letters*, **2010**, 97, 132112	3.4	16

170	Electronic properties of two-dimensional hexagonal germanium. *Applied Physics Letters*, **2010**, 96, 082114	3.4	98
169	**2010**,		4
168	Study of leakage mechanism and trap density in porous low-k materials **2010**,		10
167	Nontrigonal Ge dangling bond interface defect in condensation-grown (100)Si1−xGex/SiO2. *Physical Review B*, **2009**, 79,	3.3	28
166	Size-dependent interface band alignment between Si nanocrystals and lattice-matched Gd2O3. *Applied Physics Letters*, **2009**, 95, 102107	3.4	9
165	Trigonal paramagnetic interface defect in epitaxial Ge3N4/(111)Ge. *Applied Physics Letters*, **2009**, 95, 183501	3.4	3
164	Valence band energy in confined Si1−xGex (0.28. *Applied Physics Letters*, **2009**, 94, 172106	3.4	18
163	High-k Dielectrics and Metal Gates for Future Generation Memory Devices. *ECS Transactions*, **2009**, 19, 29-40	1	10
162	Interface analysis of HfO2films on (1 0 0)Si using x-ray photoelectron spectroscopy. *Journal Physics D: Applied Physics*, **2009**, 42, 035308	3	19
161	Barrier Characterization at Interfaces of High-Mobility Semiconductors with Oxide Insulators. *ECS Transactions*, **2009**, 25, 95-103	1	3
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