

# David Cooper

## List of Publications by Year in descending order

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52  
papers

1,277  
citations

361413

20  
h-index

361022

35  
g-index

55  
all docs

55  
docs citations

55  
times ranked

966  
citing authors

#	ARTICLE	IF	CITATIONS
1	Strain measurement at the nanoscale: Comparison between convergent beam electron diffraction, nano-beam electron diffraction, high resolution imaging and dark field electron holography. Ultramicroscopy, 2013, 131, 10-23.	1.9	115
2	Strain mapping of semiconductor specimens with nm-scale resolution in a transmission electron microscope. Micron, 2016, 80, 145-165.	2.2	104
3	Improved strain precision with high spatial resolution using nanobeam precession electron diffraction. Applied Physics Letters, 2013, 103, .	3.3	101
4	Medium resolution off-axis electron holography with millivolt sensitivity. Applied Physics Letters, 2007, 91, .	3.3	69
5	Improvement in electron holographic phase images of focused-ion-beam-milled GaAs and Si p-n junctions by in situ annealing. Applied Physics Letters, 2006, 88, 063510.	3.3	61
6	Dopant profiling of focused ion beam milled semiconductors using off-axis electron holography; reducing artifacts, extending detection limits and reducing the effects of gallium implantation. Ultramicroscopy, 2010, 110, 383-389.	1.9	59
7	Dark field electron holography for quantitative strain measurements with nanometer-scale spatial resolution. Applied Physics Letters, 2009, 95, .	3.3	52
8	Dark field electron holography for strain measurement. Ultramicroscopy, 2011, 111, 227-238.	1.9	52
9	Direct comparison of off-axis holography and differential phase contrast for the mapping of electric fields in semiconductors by transmission electron microscopy.. Ultramicroscopy, 2019, 198, 58-72.	1.9	49
10	Strain evolution during the silicidation of nanometer-scale SiGe semiconductor devices studied by dark field electron holography. Applied Physics Letters, 2010, 96, 113508.	3.3	42
11	Combining 2 nm Spatial Resolution and 0.02% Precision for Deformation Mapping of Semiconductor Specimens in a Transmission Electron Microscope by Precession Electron Diffraction. Nano Letters, 2015, 15, 5289-5294.	9.1	37
12	Strain mapping for the semiconductor industry by dark-field electron holography and nanobeam electron diffraction with nm resolution. Semiconductor Science and Technology, 2010, 25, 095012.	2.0	33
13	The influence of electron irradiation on electron holography of focused ion beam milled GaAs p-n junctions. Journal of Applied Physics, 2007, 101, 094508.	2.5	31
14	Experimental off-axis electron holography of focused ion beam-prepared Si p-n junctions with different dopant concentrations. Journal of Applied Physics, 2008, 104, .	2.5	30
15	Quantitative strain mapping of InAs/InP quantum dots with 1â€‰nm spatial resolution using dark field electron holography. Applied Physics Letters, 2011, 99, .	3.3	30
16	Quantitative off-axis electron holography of GaAs p-n junctions prepared by focused ion beam milling. Journal of Microscopy, 2009, 233, 102-113.	1.8	28
17	Off-axis electron holography combining summation of hologram series with double-exposure phase-shifting: Theory and application. Ultramicroscopy, 2018, 193, 52-63.	1.9	27
18	Strain mapping for the silicon-on-insulator generation of semiconductor devices by high-angle annular dark field scanning electron transmission microscopy. Applied Physics Letters, 2012, 100, .	3.3	24

#	ARTICLE	IF	CITATIONS
19	Extending the detection limit of dopants for focused ion beam prepared semiconductor specimens examined by off-axis electron holography. <i>Journal of Applied Physics</i> , 2009, 106, .	2.5	20
20	Field Mapping with Nanometer-Scale Resolution for the Next Generation of Electronic Devices. <i>Nano Letters</i> , 2011, 11, 4585-4590.	9.1	20
21	Off-axis electron holography for the measurement of active dopants in silicon semiconductor devices. <i>Journal Physics D: Applied Physics</i> , 2016, 49, 474001.	2.8	20
22	Improved measurement of electric fields by nanobeam precession electron diffraction. <i>Journal of Applied Physics</i> , 2020, 127, .	2.5	19
23	Thermal robustness of magnetic tunnel junctions with perpendicular shape anisotropy. <i>Nanoscale</i> , 2020, 12, 6378-6384.	5.6	18
24	Atomic resolution electrostatic potential mapping of graphene sheets by off-axis electron holography. <i>Journal of Applied Physics</i> , 2014, 115, .	2.5	17
25	Strain mapping with nm-scale resolution for the silicon-on-insulator generation of semiconductor devices by advanced electron microscopy. <i>Journal of Applied Physics</i> , 2012, 112, .	2.5	16
26	Three-dimensional measurement of Mg dopant distribution and electrical activity in GaN by correlative atom probe tomography and off-axis electron holography. <i>Journal of Applied Physics</i> , 2020, 127, 065702.	2.5	15
27	Determination of the internal piezoelectric potentials and indium concentration in InGaN based quantum wells grown on relaxed InGaN pseudo-substrates by off-axis electron holography. <i>Nanotechnology</i> , 2020, 31, 475705.	2.6	14
28	Reduction of electrical damage in specimens prepared using focused ion beam milling for dopant profiling using off-axis electron holography. <i>Ultramicroscopy</i> , 2008, 108, 488-493.	1.9	12
29	Nanoscale strain distributions in embedded SiGe semiconductor devices revealed by precession electron diffraction and dual lens dark field electron holography. <i>Applied Physics Letters</i> , 2015, 106, .	3.3	12
30	Correlative investigation of Mg doping in GaN layers grown at different temperatures by atom probe tomography and off-axis electron holography. <i>Nanotechnology</i> , 2020, 31, 045702.	2.6	12
31	High-sensitivity mapping of magnetic induction fields with nanometer-scale resolution: comparison of off-axis electron holography and pixelated differential phase contrast. <i>Journal Physics D: Applied Physics</i> , 2021, 54, 085001.	2.8	12
32	The reduction of the substitutional C content in annealed Si/SiGeC superlattices studied by dark-field electron holography. <i>Semiconductor Science and Technology</i> , 2011, 26, 125010.	2.0	11
33	The addition of strain in uniaxially strained transistors by both SiN contact etch stop layers and recessed SiGe sources and drains. <i>Journal of Applied Physics</i> , 2012, 112, .	2.5	11
34	Field mapping of focused ion beam prepared semiconductor devices by off-axis and dark field electron holography. <i>Semiconductor Science and Technology</i> , 2013, 28, 125013.	2.0	10
35	Quantitative Mapping of the Charge Density in a Monolayer of MoS <sub>2</sub> at Atomic Resolution by Off-Axis Electron Holography. <i>ACS Nano</i> , 2020, 14, 524-530.	14.6	10
36	Origins of nanoscale emission inhomogeneities of high content red emitting InGaN/InGaN quantum wells. <i>Journal of Applied Physics</i> , 2021, 129, .	2.5	9

#	ARTICLE	IF	CITATIONS
37	High-precision deformation mapping in finFET transistors with two nanometre spatial resolution by precession electron diffraction. Applied Physics Letters, 2017, 110, 223109.	3.3	8
38	Electron beam induced current microscopy of silicon $n$ junctions in a scanning transmission electron microscope. Journal of Applied Physics, 2021, 129, .	2.5	8
39	Towards rapid nanoscale measurement of strain in III-nitride heterostructures. Applied Physics Letters, 2013, 103, 231904.	3.3	7
40	Practical aspects of strain measurement in thin SiGe layers by (004) dark-field electron holography in Lorentz mode. Micron, 2014, 62, 52-65.	2.2	7
41	Highly spatially resolved mapping of the piezoelectric potentials in InGaN quantum well structures by off-axis electron holography. Journal of Applied Physics, 2020, 128, .	2.5	7
42	Multi-microscopy nanoscale characterization of the doping profile in a hybrid Mg/Ge-doped tunnel junction. Nanotechnology, 2020, 31, 465706.	2.6	6
43	Interpretation of phase images of delta-doped layers. Microscopy (Oxford, England), 2013, 62, S87-S98.	1.5	5
44	Fine electron biprism on a Si-on-insulator chip for off-axis electron holography. Ultramicroscopy, 2018, 185, 81-89.	1.9	5
45	Quantitative dopant profiling of laser annealed focused ion beam-prepared silicon p-n junctions with nanometer-scale resolution. Applied Physics Letters, 2008, 93, 183509.	3.3	4
46	An electron holography study of perpendicular magnetic tunnel junctions nanostructured by deposition on pre-patterned conducting pillars. Nanoscale, 2020, 12, 17312-17318.	5.6	4
47	Mapping of the electrostatic potentials in MOCVD and hybrid GaN tunnel junctions for InGaN/GaN blue emitting light emitting diodes by off-axis electron holography correlated with structural, chemical, and optoelectronic characterization. Journal of Applied Physics, 2021, 130, .	2.5	4
48	Off-axis electron holography for the direct visualization of perpendicular shape anisotropy in nanoscale 3D magnetic random-access-memory devices. APL Materials, 2022, 10, .	5.1	4
49	Quantitative Visualization of Thermally Enhanced Perpendicular Shape Anisotropy STT-MRAM Nanopillars. Nano Letters, 2022, 22, 4000-4005.	9.1	3
50	Understanding the phase images from off-axis electron holography. , 2009, , .		1
51	The Measurement of Strain, Chemistry and Electric Fields by STEM based Techniques. Microscopy and Microanalysis, 2017, 23, 1414-1415.	0.4	1
52	Thermally propagated Al contacts on SiGe nanowires characterized by electron beam induced current in a scanning transmission electron microscope. Nanotechnology, 2022, 33, 035712.	2.6	0