

Gustaaf Borghs

List of Publications by Year in descending order

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61
papers

4,346
citations

94433

37
h-index

128289

60
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62
all docs

62
docs citations

62
times ranked

6918
citing authors

#	ARTICLE	IF	CITATIONS
1	Charge carrier mobility in thin films of organic semiconductors by the gated van der Pauw method. Nature Communications, 2017, 8, 14975.	12.8	62
2	Ion Current Rectification, Limiting and Overlimiting Conductances in Nanopores. PLoS ONE, 2015, 10, e0124171.	2.5	15
3	Silicon Substrate Engineered High-Voltage High-Temperature GaN-DHFETs. IEEE Transactions on Electron Devices, 2013, 60, 2217-2223.	3.0	20
4	Tuning the Fano Resonance Between Localized and Propagating Surface Plasmon Resonances for Refractive Index Sensing Applications. Plasmonics, 2013, 8, 1379-1385.	3.4	66
5	Enhanced Optical Trapping and Arrangement of Nano-Objects in a Plasmonic Nanocavity. Nano Letters, 2012, 12, 125-132.	9.1	168
6	Boosting the Figure-Of-Merit of LSPR-Based Refractive Index Sensing by Phase-Sensitive Measurements. Nano Letters, 2012, 12, 1655-1659.	9.1	161
7	Measuring the Electric Charge and Zeta Potential of Nanometer-Sized Objects Using Pyramidal-Shaped Nanopores. Analytical Chemistry, 2012, 84, 8490-8496.	6.5	112
8	Electrically active defects at AlN/Si interface studied by DLTS and ESR. Physica Status Solidi (A) Applications and Materials Science, 2012, 209, 1851-1856.	1.8	17
9	Excitation wavelength dependent surface enhanced Raman scattering of 4-aminothiophenol on gold nanorings. Nanoscale, 2012, 4, 1606.	5.6	117
10	Method for flow measurement in microfluidic channels based on electrical impedance spectroscopy. Microfluidics and Nanofluidics, 2012, 12, 17-23.	2.2	22
11	Gold Nanoparticle Dimers for Plasmon Sensing. Langmuir, 2011, 27, 7884-7891.	3.5	63
12	Fluorescence Near Gold Nanoparticles for DNA Sensing. Analytical Chemistry, 2011, 83, 1307-1314.	6.5	111
13	Investigation of Light-Induced Deep-Level Defect Activation at the AlN/Si Interface. Applied Physics Express, 2011, 4, 094101.	2.4	11
14	Self-assembled hexagonal double fishnets as negative index materials. Applied Physics Letters, 2011, 98, 091101.	3.3	27
15	Highly confined surface plasmon polariton resonances in rectangular nanopore cavities. Physica Status Solidi - Rapid Research Letters, 2010, 4, 247-249.	2.4	11
16	Local solid-state modification of nanopore surface charges. Nanotechnology, 2010, 21, 335703.	2.6	8
17	Groove-gratings to optimize the electric field enhancement in a plasmonic nanoslit-cavity. Journal of Applied Physics, 2010, 108, 034319.	2.5	14
18	Electrical Excitation of Confined Surface Plasmon Polaritons in Metallic Slot Waveguides. Nano Letters, 2010, 10, 1429-1432.	9.1	52

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19	Experimental and simulation study of breakdown voltage enhancement of AlGaIn/GaN heterostructures by Si substrate removal. Applied Physics Letters, 2010, 97, .	3.3	57
20	Silicon Substrate Removal of GaN DHFETs for Enhanced ($\approx 1100\text{ V}$) Breakdown Voltage. IEEE Electron Device Letters, 2010, 31, 851-853.	3.9	46
21	Plasmonic Modes of Metallic Semishells in a Polymer Film. ACS Nano, 2010, 4, 1457-1464.	14.6	66
22	Strong location dependent surface enhanced Raman scattering on individual gold semishell and nanobowl particles. Physical Chemistry Chemical Physics, 2010, 12, 11222.	2.8	41
23	Enhanced resolution of poly(methyl methacrylate) electron resist by thermal processing. Journal of Vacuum Science & Technology B, 2009, 27, 1915-1918.	1.3	19
24	Observation of plasmonic dipolar anti-bonding mode in silver nanoring structures. Nanotechnology, 2009, 20, 465203.	2.6	67
25	Spine-shaped gold protrusions improve the adherence and electrical coupling of neurons with the surface of micro-electronic devices. Journal of the Royal Society Interface, 2009, 6, 1153-1165.	3.4	134
26	Direct Evidence of High Spatial Localization of Hot Spots in Surface-Enhanced Raman Scattering. Angewandte Chemie - International Edition, 2009, 48, 9932-9935.	13.8	58
27	Localized surface plasmon resonance biosensor integrated with microfluidic chip. Biomedical Microdevices, 2009, 11, 893-901.	2.8	78
28	Focusing Plasmons in Nanoslits for Surface-Enhanced Raman Scattering. Small, 2009, 5, 2876-2882.	10.0	44
29	High breakdown voltage in AlGaIn/GaN/AlGaIn double heterostructures grown on 4 inch Si substrates. Physica Status Solidi C: Current Topics in Solid State Physics, 2009, 6, S988.	0.8	25
30	Electrical detection of confined gap plasmons in metal-insulator-metal waveguides. Nature Photonics, 2009, 3, 283-286.	31.4	346
31	An on-chip localized surface plasmon resonance-based biosensor for label-free monitoring of antigen-antibody reaction. Microelectronic Engineering, 2009, 86, 2437-2441.	2.4	34
32	Direct Detection of Molecular Biorecognition by Dipole Sensing Mechanism. Journal of the American Chemical Society, 2009, 131, 4788-4794.	13.7	33
33	Hollow Platinum Nanoshell Tube Arrays: Fabrication and Characterization. Journal of Physical Chemistry C, 2009, 113, 5472-5477.	3.1	16
34	Symmetry breaking induced optical properties of gold open shell nanostructures. Optics Express, 2009, 17, 23765.	3.4	75
35	Fabrication and Optical Properties of Gold Semishells. Journal of Physical Chemistry C, 2009, 113, 3110-3115.	3.1	77
36	Fabrication, Characterization, and Optical Properties of Gold Nanobowl Submonolayer Structures. Langmuir, 2009, 25, 1822-1827.	3.5	93

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37	AlGaIn/GaN/AlGaIn Double Heterostructures on Silicon Substrates for High Breakdown Voltage Field-Effect Transistors with low On-Resistance. Japanese Journal of Applied Physics, 2009, 48, 04C101.	1.5	63
38	Novel concepts for improved communication between nerve cells and silicon electronic devices. Solid-State Electronics, 2008, 52, 533-539.	1.4	20
39	Enhanced localized surface plasmon resonance sensing on three-dimensional gold nanoparticles assemblies. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2008, 321, 313-317.	4.7	62
40	Surface morphology changes on silica-coated gold colloids. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2008, 322, 225-233.	4.7	43
41	Coupled plasmon resonances in monolayers of metal nanoparticles and nanoshells. Physical Review B, 2008, 77, .	3.2	74
42	On-chip chemical stimulation of neurons by local and controlled release of neurotransmitter. , 2008, 2008, 2745-8.		0
43	The fabrication and optical property of silver nanoplates with different thicknesses. Nanotechnology, 2008, 19, 325702.	2.6	35
44	Stability of Mixed PEO~Thiol SAMs for Biosensing Applications. Langmuir, 2008, 24, 3949-3954.	3.5	60
45	Electronic DNA hybridisation detection in low-ionic strength solutions. Journal of Experimental Nanoscience, 2008, 3, 157-169.	2.4	9
46	Engulfment of Protruding Micro-Nails Fabricated on Chip Surface by Cultured Neurons Improve Their Adhesion to The Electronic Device. Materials Research Society Symposia Proceedings, 2007, 1004, 1.	0.1	1
47	Highly Efficient Detector of the Neurotransmitter ACh and AChE Inhibitors. Materials Research Society Symposia Proceedings, 2007, 1009, 1.	0.1	0
48	Silane Ligand Exchange to Make Hydrophobic Superparamagnetic Nanoparticles Water-Dispersible. Chemistry of Materials, 2007, 19, 1821-1831.	6.7	506
49	On-chip separation of magnetic particles with different magnetophoretic mobilities. Journal of Applied Physics, 2007, 101, 024913.	2.5	47
50	Manipulation of magnetic particles on chip by magnetophoretic actuation and dielectrophoretic levitation. Applied Physics Letters, 2007, 90, 184109.	3.3	57
51	Formation of Dense Self-assembled Monolayers of (n-Decyl)trichlorosilanes on Ta/Ta2O5. Langmuir, 2007, 23, 443-451.	3.5	37
52	Magnetic Particles as Labels in Bioassays:~ Interactions between a Biotinylated Gold Substrate and Streptavidin Magnetic Particles. Journal of Physical Chemistry C, 2007, 111, 12227-12235.	3.1	40
53	Local Electrical Detection of Single Nanoparticle Plasmon Resonance. Nano Letters, 2007, 7, 703-706.	9.1	32
54	The Optimization of Magnetosandwich Assays for the Sensitive and Specific Detection of Proteins in Serum. Analytical Chemistry, 2007, 79, 7540-7548.	6.5	27

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55	On-chip controlled release of neurotransmitter molecules. <i>Microelectronic Engineering</i> , 2007, 84, 1714-1718.	2.4	3
56	Comparison of random and oriented immobilisation of antibody fragments on mixed self-assembled monolayers. <i>Journal of Immunological Methods</i> , 2006, 312, 167-181.	1.4	144
57	Organic thin-film transistors as transducers for (bio) analytical applications. <i>Analytical and Bioanalytical Chemistry</i> , 2005, 384, 354-365.	3.7	103
58	Engineering Camel Single-Domain Antibodies and Immobilization Chemistry for Human Prostate-Specific Antigen Sensing. <i>Analytical Chemistry</i> , 2005, 77, 7547-7555.	6.5	106
59	Depletion type floating gate p-channel MOS transistor for recording action potentials generated by cultured neurons. <i>Biosensors and Bioelectronics</i> , 2004, 19, 1703-1709.	10.1	49
60	Realization and Characterization of Porous Gold for Increased Protein Coverage on Acoustic Sensors. <i>Analytical Chemistry</i> , 2004, 76, 4299-4306.	6.5	111
61	Biosensing Based on Light Absorption of Nanoscaled Gold and Silver Particles. <i>Analytical Chemistry</i> , 2003, 75, 6894-6900.	6.5	342