Gustaaf Borghs

List of Publications by Year in descending order

Source: https://exaly.com/author-pdf/11896211/publications.pdf

Version: 2024-02-01

61 papers	4,346 citations	94433 37 h-index	128289 60 g-index
62 all docs	62 docs citations	62 times ranked	6918 citing authors

#	Article	IF	Citations
1	Silane Ligand Exchange to Make Hydrophobic Superparamagnetic Nanoparticles Water-Dispersible. Chemistry of Materials, 2007, 19, 1821-1831.	6.7	506
2	Electrical detection of confined gap plasmons in metalâ€“insulatorâ€“metal waveguides. Nature Photonics, 2009, 3, 283-286.	31.4	346
3	Biosensing Based on Light Absorption of Nanoscaled Gold and Silver Particles. Analytical Chemistry, 2003, 75, 6894-6900.	6.5	342
4	Enhanced Optical Trapping and Arrangement of Nano-Objects in a Plasmonic Nanocavity. Nano Letters, 2012, 12, 125-132.	9.1	168
5	Boosting the Figure-Of-Merit of LSPR-Based Refractive Index Sensing by Phase-Sensitive Measurements. Nano Letters, 2012, 12, 1655-1659.	9.1	161
6	Comparison of random and oriented immobilisation of antibody fragments on mixed self-assembled monolayers. Journal of Immunological Methods, 2006, 312, 167-181.	1.4	144
7	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
8	Excitation wavelength dependent surface enhanced Raman scattering of 4-aminothiophenol on gold nanorings. Nanoscale, 2012, 4, 1606.	5.6	117
9	Measuring the Electric Charge and Zeta Potential of Nanometer-Sized Objects Using Pyramidal-Shaped Nanopores. Analytical Chemistry, 2012, 84, 8490-8496.	6.5	112
10	Realization and Characterization of Porous Gold for Increased Protein Coverage on Acoustic Sensors. Analytical Chemistry, 2004, 76, 4299-4306.	6.5	111
11	Fluorescence Near Gold Nanoparticles for DNA Sensing. Analytical Chemistry, 2011, 83, 1307-1314.	6.5	111
12	Engineering Camel Single-Domain Antibodies and Immobilization Chemistry for Human Prostate-Specific Antigen Sensing. Analytical Chemistry, 2005, 77, 7547-7555.	6.5	106
13	Organic thin-film transistors as transducers for (bio) analytical applications. Analytical and Bioanalytical Chemistry, 2005, 384, 354-365.	3.7	103
14	Fabrication, Characterization, and Optical Properties of Gold Nanobowl Submonolayer Structures. Langmuir, 2009, 25, 1822-1827.	3.5	93
15	Localized surface plasmon resonance biosensor integrated with microfluidic chip. Biomedical Microdevices, 2009, 11, 893-901.	2.8	78
16	Fabrication and Optical Properties of Gold Semishells. Journal of Physical Chemistry C, 2009, 113, 3110-3115.	3.1	77
17	Symmetry breaking induced optical properties of gold open shell nanostructures. Optics Express, 2009, 17, 23765.	3.4	75
18	Coupled plasmon resonances in monolayers of metal nanoparticles and nanoshells. Physical Review B, 2008, 77, .	3.2	74

#	Article	IF	Citations
19	Observation of plasmonic dipolar anti-bonding mode in silver nanoring structures. Nanotechnology, 2009, 20, 465203.	2.6	67
20	Plasmonic Modes of Metallic Semishells in a Polymer Film. ACS Nano, 2010, 4, 1457-1464.	14.6	66
21	Tuning the Fano Resonance Between Localized and Propagating Surface Plasmon Resonances for Refractive Index Sensing Applications. Plasmonics, 2013, 8, 1379-1385.	3.4	66
22	AlGaN/GaN/AlGaN 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
23	Gold Nanoparticle Dimers for Plasmon Sensing. Langmuir, 2011, 27, 7884-7891.	3.5	63
24	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
25	Charge carrier mobility in thin films of organic semiconductors by the gated van der Pauw method. Nature Communications, 2017, 8, 14975.	12.8	62
26	Stability of Mixed PEOâ^'Thiol SAMs for Biosensing Applications. Langmuir, 2008, 24, 3949-3954.	3.5	60
27	Direct Evidence of High Spatial Localization of Hot Spots in Surfaceâ€Enhanced Raman Scattering. Angewandte Chemie - International Edition, 2009, 48, 9932-9935.	13.8	58
28	Manipulation of magnetic particles on chip by magnetophoretic actuation and dielectrophoretic levitation. Applied Physics Letters, 2007, 90, 184109.	3.3	57
29	Experimental and simulation study of breakdown voltage enhancement of AlGaN/GaN heterostructures by Si substrate removal. Applied Physics Letters, 2010, 97, .	3.3	57
30	Electrical Excitation of Confined Surface Plasmon Polaritons in Metallic Slot Waveguides. Nano Letters, 2010, 10, 1429-1432.	9.1	52
31	Depletion type floating gate p-channel MOS transistor for recording action potentials generated by cultured neurons. Biosensors and Bioelectronics, 2004, 19, 1703-1709.	10.1	49
32	On-chip separation of magnetic particles with different magnetophoretic mobilities. Journal of Applied Physics, 2007, 101, 024913.	2.5	47
33	Silicon Substrate Removal of GaN DHFETs for Enhanced (<1100 V) Breakdown Voltage. IEEE Electron Device Letters, 2010, 31, 851-853.	3.9	46
34	Focusing Plasmons in Nanoslits for Surfaceâ€Enhanced Raman Scattering. Small, 2009, 5, 2876-2882.	10.0	44
35	Surface morphology changes on silica-coated gold colloids. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2008, 322, 225-233.	4.7	43
36	Strong location dependent surface enhanced Raman scattering on individual gold semishell and nanobowl particles. Physical Chemistry Chemical Physics, 2010, 12, 11222.	2.8	41

#	Article	IF	Citations
37	Magnetic Particles as Labels in Bioassays:â€‰Interactions between a Biotinylated Gold Substrate and Streptavidin Magnetic Particles. Journal of Physical Chemistry C, 2007, 111, 12227-12235.	3.1	40
38	Formation of Dense Self-assembled Monolayers of (n-Decyl)trichlorosilanes on Ta/Ta2O5. Langmuir, 2007, 23, 443-451.	3.5	37
39	The fabrication and optical property of silver nanoplates with different thicknesses. Nanotechnology, 2008, 19, 325702.	2.6	35
40	An on-chip localized surface plasmon resonance-based biosensor for label-free monitoring of antigenâ€“antibody reaction. Microelectronic Engineering, 2009, 86, 2437-2441.	2.4	34
41	Direct Detection of Molecular Biorecognition by Dipole Sensing Mechanism. Journal of the American Chemical Society, 2009, 131, 4788-4794.	13.7	33
42	Local Electrical Detection of Single Nanoparticle Plasmon Resonance. Nano Letters, 2007, 7, 703-706.	9.1	32
43	The Optimization of Magnetosandwich Assays for the Sensitive and Specific Detection of Proteins in Serum. Analytical Chemistry, 2007, 79, 7540-7548.	6.5	27
44	Self-assembled hexagonal double fishnets as negative index materials. Applied Physics Letters, 2011, 98, 091101.	3.3	27
45	High breakdown voltage in AlGaN/GaN/AlGaN double heterostructures grown on 4 inch Si substrates. Physica Status Solidi C: Current Topics in Solid State Physics, 2009, 6, S988.	0.8	25
46	Method for flow measurement in microfluidic channels based on electrical impedance spectroscopy. Microfluidics and Nanofluidics, 2012, 12, 17-23.	2.2	22
47	Novel concepts for improved communication between nerve cells and silicon electronic devices. Solid-State Electronics, 2008, 52, 533-539.	1.4	20
48	Silicon Substrate Engineered High-Voltage High-Temperature GaN-DHFETs. IEEE Transactions on Electron Devices, 2013, 60, 2217-2223.	3.0	20
49	Enhanced resolution of poly(methyl methacrylate) electron resist by thermal processing. Journal of Vacuum Science & Technology B, 2009, 27, 1915-1918.	1.3	19
50	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
51	Hollow Platinum Nanoshell Tube Arrays: Fabrication and Characterization. Journal of Physical Chemistry C, 2009, 113, 5472-5477.	3.1	16
52	Ion Current Rectification, Limiting and Overlimiting Conductances in Nanopores. PLoS ONE, 2015, 10, e0124171.	2.5	15
53	Groove-gratings to optimize the electric field enhancement in a plasmonic nanoslit-cavity. Journal of Applied Physics, 2010, 108, 034319.	2.5	14
54	Highly confined surface plasmon polariton resonances in rectangular nanopore cavities. Physica Status Solidi - Rapid Research Letters, 2010, 4, 247-249.	2.4	11

#	Article	IF	Citations
55	Investigation of Light-Induced Deep-Level Defect Activation at the AlN/Si Interface. Applied Physics Express, 2011, 4, 094101.	2.4	11
56	Electronic DNA hybridisation detection in low-ionic strength solutions. Journal of Experimental Nanoscience, 2008, 3, 157-169.	2.4	9
57	Local solid-state modification of nanopore surface charges. Nanotechnology, 2010, 21, 335703.	2.6	8
58	On-chip controlled release of neurotransmitter molecules. Microelectronic Engineering, 2007, 84, 1714-1718.	2.4	3
59	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
60	Highly Efficient Detector of the Neurotransmitter ACh and AChE Inhibitors. Materials Research Society Symposia Proceedings, 2007, 1009, 1.	0.1	0
61	On-chip chemical stimulation of neurons by local and controlled release of neurotransmitter. , 2008, 2008, 2745-8.		0