Pol Van Dorpe

List of Publications by Year in Descending Order

133 papers	7,762 citations	47 h-index	86 g-index
175 ext. papers	8,631 ext. citations	7.5 avg, IF	5.78 L-index

#	Paper	IF	Citations
133	Boosting the sensitivity of the nanopore field-effect transistor to translocating single molecules. *IEEE Sensors Journal*, **2022**, 1-1	4	1
132	Inverse design assisted coherent optical lattices.. *Optics Express*, **2022**, 30, 11384-11393	3.3	0
131	Probing higher order optical modes in all-dielectric nanodisk, -square, and -triangle by aperture type scanning near-field optical microscopy. *Nanophotonics*, **2022**, 11, 543-557	6.3	0
130	Modeling and Optimization of Plasmonic Detectors for Beyond-CMOS Plasmonic Majority Logic Gates. *Journal of Lightwave Technology*, **2020**, 38, 5092-5099	4	1
129	Electro-Osmotic Vortices Promote the Capture of Folded Proteins by PlyAB Nanopores. *Nano Letters*, **2020**, 20, 3819-3827	11.5	27
128	Towards a miniaturized application-specific Raman spectrometer **2020**,		2
127	Accurate modeling of a biological nanopore with an extended continuum framework. *Nanoscale*, **2020**, 12, 16775-16795	7.7	15
126	Revival and Expansion of the Theory of Coherent Lattices. *Physical Review Letters*, **2020**, 125, 184101	7.4	1
125	Engineering and Modeling the Electrophoretic Trapping of a Single Protein Inside a Nanopore. *ACS Nano*, **2019**, 13, 9980-9992	16.7	30
124	Engineering electric and magnetic dipole coupling in arrays of dielectric nanoparticles. *Journal of Applied Physics*, **2018**, 123, 083101	2.5	25
123	High spatial resolution nanoslit SERS for single-molecule nucleobase sensing. *Nature Communications*, **2018**, 9, 1733	17.4	88
122	Direct on-chip DNA synthesis using electrochemically modified gold electrodes as solid support. *Japanese Journal of Applied Physics*, **2018**, 57, 04FM01	1.4	2
121	Mitigation of UV-Induced Propagation Loss in PECVD Silicon Nitride Photonic Waveguides. *ACS Photonics*, **2018**, 5, 2145-2150	6.3	3
120	Supercritical Angle Fluorescence Characterization Using Spatially Resolved Fourier Plane Spectroscopy. *Analytical Chemistry*, **2018**, 90, 4263-4267	7.8	4
119	Two-Photon Microscopy with a Double-Wavelength Metasurface Objective Lens. *Nano Letters*, **2018** , 18, 4943-4948	11.5	46
118	Wet etching of TiN in 1-D and 2-D confined nano-spaces of FinFET transistors. *Microelectronic Engineering*, **2018**, 200, 56-61	2.5	3
117	Waveguide excitation and collection of surface-enhanced Raman scattering from a single plasmonic antenna. *Nanophotonics*, **2018**, 7, 1299-1306	6.3	18

116	Probing Local Potentials inside Metallic Nanopores with SERS and Bipolar Electrochemistry. *Advanced Optical Materials*, **2017**, 5, 1600907	8.1	9
115	Spectroscopic sensing with silicon nitride photonic integrated circuits **2017**,		2
114	Suppression of Bulk Fluorescence Noise by Combining Waveguide-Based Near-Field Excitation and Collection. *ACS Photonics*, **2017**, 4, 495-500	6.3	10
113	Single Asymmetric Plasmonic Antenna as a Directional Coupler to a Dielectric Waveguide. *ACS Photonics*, **2017**, 4, 1398-1402	6.3	31
112	Electrically Driven Unidirectional Optical Nanoantennas. *Nano Letters*, **2017**, 17, 7433-7439	11.5	40
111	Near-Field Mapping of Optical Fabry-Perot Modes in All-Dielectric Nanoantennas. *Nano Letters*, **2017**, 17, 7629-7637	11.5	12
110	Enhancing Magnetic Dipole Emission by a Nano-Doughnut-Shaped Silicon Disk. *ACS Photonics*, **2017**, 4, 1893-1898	6.3	51
109	Integrated Nanophotonic Excitation and Detection of Fluorescent Microparticles. *ACS Photonics*, **2017**, 4, 1937-1944	6.3	9
108	Nanoparticle Scattering for Multijunction Solar Cells: The Tradeoff Between Absorption Enhancement and Transmission Loss. *IEEE Journal of Photovoltaics*, **2016**, 6, 1678-1687	3.7	6
107	. *IEEE Photonics Journal*, **2016**, 8, 1-11	1.8	18
106	Surface Enhanced Raman Spectroscopy Using a Single Mode Nanophotonic-Plasmonic Platform. *ACS Photonics*, **2016**, 3, 102-108	6.3	70
105	Asymmetric plasmonic induced ionic noise in metallic nanopores. *Nanoscale*, **2016**, 8, 12324-9	7.7	7
104	All-Dielectric Antenna Wavelength Router with Bidirectional Scattering of Visible Light. *Nano Letters*, **2016**, 16, 4396-403	11.5	76
103	Development of nanostars as a biocompatible tumor contrast agent: toward in vivo SERS imaging. *International Journal of Nanomedicine*, **2016**, 11, 3703-14	7.3	27
102	Direct Fabrication of Monodisperse Silica Nanorings from Hollow Spheres - A Template for Core-Shell Nanorings. *ACS Applied Materials & Interfaces*, **2016**, 8, 10451-8	9.5	10
101	Visualization of molecular fluorescence point spread functions via remote excitation switching fluorescence microscopy. *Nature Communications*, **2015**, 6, 6287	17.4	53
100	Two-Photon Luminescence of Gold Nanorods Mediated by Higher Order Plasmon Modes. *ACS Photonics*, **2015**, 2, 410-416	6.3	23
99	Revisiting the Surface Sensitivity of Nanoplasmonic Biosensors. *ACS Photonics*, **2015**, 2, 425-431	6.3	70

98	Bright and dark plasmon resonances of nanoplasmonic antennas evanescently coupled with a silicon nitride waveguide. *Optics Express*, **2015**, 23, 3088-101	3.3	46
97	Raman fingerprinting of single dielectric nanoparticles in plasmonic nanopores. *Nanoscale*, **2015**, 7, 18612-8	7.7	20
96	Full wetting of plasmonic nanopores through two-component droplets. *Chemical Science*, **2015**, 6, 6564-6571	9.4	10
95	Robustness of surface-enhanced Raman scattering substrate with a mercaptosilane adhesive layer for in vivo sensing applications. *Japanese Journal of Applied Physics*, **2015**, 54, 067002	1.4	4
94	Biosensing Using Diffractively Coupled Plasmonic Crystals: the Figure of Merit Revisited. *Advanced Optical Materials*, **2015**, 3, 176-181	8.1	44
93	Broadband absorption enhancement in ultra-thin crystalline Si solar cells by incorporating metallic and dielectric nanostructures in the back reflector. *Progress in Photovoltaics: Research and Applications*, **2015**, 23, 1144-1156	6.8	16
92	Silicon and silicon nitride photonic circuits for spectroscopic sensing on-a-chip [Invited]. *Photonics Research*, **2015**, 3, B47	6	113
91	Nanoparticle scattering for radiation-hard multi-junction space solar cells **2015**,		1
90	On the Use of Group Theory in Understanding the Optical Response of a Nanoantenna. *IEEE Transactions on Antennas and Propagation*, **2015**, 63, 1589-1602	4.9	16
89	Photoresistance switching of plasmonic nanopores. *Nano Letters*, **2015**, 15, 776-82	11.5	35
88	Nanoplasmonic Sensors with Various Photonic Coupling Effects for Detecting Different Targets. *Journal of Physical Chemistry C*, **2015**, 119, 29116-29122	3.8	26
87	Biosensing with SiO2-covered SPR substrates in a commercial SPR-tool. *Sensors and Actuators B: Chemical*, **2014**, 200, 167-172	8.5	15
86	Spectral interferometric microscopy reveals absorption by individual optical nanoantennas from extinction phase. *Nature Communications*, **2014**, 5, 3748	17.4	20
85	Capturing wetting states in nanopatterned silicon. *ACS Nano*, **2014**, 8, 885-93	16.7	51
84	Plasmonic Nanoantennas: Lateral Magnetic Near-Field Imaging of Plasmonic Nanoantennas With Increasing Complexity (Small 10/2014). *Small*, **2014**, 10, 1958-1958	11	
83	300 mm Wafer-level, ultra-dense arrays of Au-capped nanopillars with sub-10 nm gaps as reliable SERS substrates. *Nanoscale*, **2014**, 6, 12391-6	7.7	56
82	Directional fluorescence emission by individual V-antennas explained by mode expansion. *ACS Nano*, **2014**, 8, 8232-41	16.7	63
81	Mode parity-controlled Fano- and Lorentz-like line shapes arising in plasmonic nanorods. *Nano Letters*, **2014**, 14, 2322-9	11.5	60

80	Implementation of the Natural Mode Analysis for Nanotopologies Using a Volumetric Method of Moments (V-MoM) Algorithm. *IEEE Photonics Journal*, **2014**, 6, 1-13	1.8	5
79	Live-cell SERS endoscopy using plasmonic nanowire waveguides. *Advanced Materials*, **2014**, 26, 5124-8	24	93
78	Lateral magnetic near-field imaging of plasmonic nanoantennas with increasing complexity. *Small*, **2014**, 10, 1959-66	11	12
77	Development of a CMOS Compatible Biophotonics Platform Based on SiN Nanophotonic Waveguides **2014**,		3
76	Characterization of PECVD silicon nitride photonic components at 532 and 900 nm wavelength **2014**,		1
75	Tuning the interaction between propagating and localized surface plasmons for surface enhanced Raman scattering in water for biomedical and environmental applications. *Applied Physics Letters*, **2014**, 104, 243102	3.4	25
74	Investigation of the correlation between the bulk and surface sensing performance in plasmonic crystals **2014**,		1
73	Raman spectroscopy and optical trapping of 20 nm polystyrene particles in plasmonic nanopores **2014**,		1
72	Unidirectional side scattering of light by a single-element nanoantenna. *Nano Letters*, **2013**, 13, 3843-9	11.5	117
71	Plasmonic nanoslit for fluidic SERS: A strategy towards genome sequencing **2013**,		1
70	Optical Properties of Metallic Semishells: Breaking the Symmetry of Plasmonic Nanoshells **2013**, 75-98		
69	Mapping magnetic near-field distributions of plasmonic nanoantennas. *ACS Nano*, **2013**, 7, 3168-76	16.7	64
68	Tuning the Fano Resonance Between Localized and Propagating Surface Plasmon Resonances for Refractive Index Sensing Applications. *Plasmonics*, **2013**, 8, 1379-1385	2.4	58
67	Harnessing plasmon-induced ionic noise in metallic nanopores. *Nano Letters*, **2013**, 13, 1724-9	11.5	20
66	Detection of DNA Bases and Oligonucleotides in Plasmonic Nanoslits Using Fluidic SERS. *IEEE Journal of Selected Topics in Quantum Electronics*, **2013**, 19, 4600707-4600707	3.8	11
65	Plasmonic Efficiency Enhancement of High Performance Organic Solar Cells with a Nanostructured Rear Electrode. *Advanced Energy Materials*, **2013**, 3, 145-150	21.8	70
64	Low-Loss Singlemode PECVD Silicon Nitride Photonic Wire Waveguides for 532–900 nm Wavelength Window Fabricated Within a CMOS Pilot Line. *IEEE Photonics Journal*, **2013**, 5, 2202809-2202809	1.8	150
63	Wafer Scale Processing of Plasmonic Nanoslit Arrays in 200mm CMOS Fab Environment. *ECS Transactions*, **2013**, 50, 413-422	1	8

62	Loss mitigation in plasmonic solar cells: aluminium nanoparticles for broadband photocurrent enhancements in GaAs photodiodes. *Scientific Reports*, **2013**, 3, 2874	4.9	103
61	Front side plasmonic effect on thin silicon epitaxial solar cells. *Solar Energy Materials and Solar Cells*, **2012**, 104, 58-63	6.4	23
60	Near-Field Interactions between Metal Nanoparticle Surface Plasmons and Molecular Excitons in Thin-Films. Part I: Absorption. *Journal of Physical Chemistry C*, **2012**, 116, 24206-24214	3.8	17
59	Ultralocal modification of surface plasmons properties in silver nanocubes. *Nano Letters*, **2012**, 12, 1288-94	11.5	92
58	Enhanced optical trapping and arrangement of nano-objects in a plasmonic nanocavity. *Nano Letters*, **2012**, 12, 125-32	11.5	134
57	Plasmon transmutation: inducing new modes in nanoclusters by adding dielectric nanoparticles. *Nano Letters*, **2012**, 12, 5020-6	11.5	68
56	Plasmonic behaviors of gold dimers perturbed by a single nanoparticle in the gap. *Nanoscale*, **2012**, 4, 7205-11	7.7	31
55	Boosting the figure-of-merit of LSPR-based refractive index sensing by phase-sensitive measurements. *Nano Letters*, **2012**, 12, 1655-9	11.5	135
54	Nano-Scale Electrical Transducers of Surface Plasmons for Integrated Biosensing **2012**, 369-384		1
53	Plasmonic nanoclusters: near field properties of the Fano resonance interrogated with SERS. *Nano Letters*, **2012**, 12, 1660-7	11.5	392
52	Near-Field Interactions between Metal Nanoparticle Surface Plasmons and Molecular Excitons in Thin-Films. Part II: Emission. *Journal of Physical Chemistry C*, **2012**, 116, 24215-24223	3.8	9
51	Excitation wavelength dependent surface enhanced Raman scattering of 4-aminothiophenol on gold nanorings. *Nanoscale*, **2012**, 4, 1606-11	7.7	97
50	Plasmon filters and resonators in metal-insulator-metal waveguides. *Optics Express*, **2012**, 20, 3408-23	3.3	71
49	Plasmon line shaping using nanocrosses for high sensitivity localized surface plasmon resonance sensing. *Nano Letters*, **2011**, 11, 391-7	11.5	370
48	Semishells: versatile plasmonic nanoparticles. *ACS Nano*, **2011**, 5, 6774-8	16.7	54
47	Fluorescence near gold nanoparticles for DNA sensing. *Analytical Chemistry*, **2011**, 83, 1307-14	7.8	99
46	Dark and bright localized surface plasmons in nanocrosses. *Optics Express*, **2011**, 19, 11034-51	3.3	52
45	Improvement of Figure of Merit for Gold Nanobar Array Plasmonic Sensors. *Plasmonics*, **2011**, 6, 665-671	2.4	54

44	Nanoscale origami for 3D optics. *Small*, **2011**, 7, 1943-8	11	121
43	Label-free genosensor based on immobilized DNA hairpins on gold surface. *Biosensors and Bioelectronics*, **2011**, 26, 3121-6	11.8	14
42	A versatile method to fabricate particle-in-cavity plasmonic nanostructures. *Journal of Materials Chemistry*, **2011**, 21, 14394		10
41	Self-assembled hexagonal double fishnets as negative index materials. *Applied Physics Letters*, **2011**, 98, 091101	3.4	27
40	Raman scattered photon transmission through a single nanoslit. *Applied Physics Letters*, **2010**, 96, 061108	3.4	8
39	Tuning plasmonic interaction between gold nanorings and a gold film for surface enhanced Raman scattering. *Applied Physics Letters*, **2010**, 97, 163106	3.4	72
38	Asymmetric optical second-harmonic generation from chiral G-shaped gold nanostructures. *Physical Review Letters*, **2010**, 104, 127401	7.4	132
37	Groove-gratings to optimize the electric field enhancement in a plasmonic nanoslit-cavity. *Journal of Applied Physics*, **2010**, 108, 034319	2.5	12
36	Experimental realization of subradiant, superradiant, and fano resonances in ring/disk plasmonic nanocavities. *ACS Nano*, **2010**, 4, 1664-70	16.7	344
35	Electrical excitation of confined surface plasmon polaritons in metallic slot waveguides. *Nano Letters*, **2010**, 10, 1429-32	11.5	48
34	Excitation of multiple dipole surface plasmon resonances in spherical silver nanoparticles. *Optics Express*, **2010**, 18, 19032-8	3.3	14
33	Plasmonic modes of metallic semishells in a polymer film. *ACS Nano*, **2010**, 4, 1457-64	16.7	59
32	Strong location dependent surface enhanced Raman scattering on individual gold semishell and nanobowl particles. *Physical Chemistry Chemical Physics*, **2010**, 12, 11222-4	3.6	35
31	Highly confined surface plasmon polariton resonances in rectangular nanopore cavities. *Physica Status Solidi - Rapid Research Letters*, **2010**, 4, 247-249	2.5	9
30	Mid-IR plasmonic antennas on silicon-rich oxinitride absorbing substrates: Nonlinear scaling of resonance wavelengths with antenna length. *Applied Physics Letters*, **2009**, 95, 253109	3.4	4
29	Observation of plasmonic dipolar anti-bonding mode in silver nanoring structures. *Nanotechnology*, **2009**, 20, 465203	3.4	62
28	Direct evidence of high spatial localization of hot spots in surface-enhanced Raman scattering. *Angewandte Chemie - International Edition*, **2009**, 48, 9932-5	16.4	50
27	Focusing plasmons in nanoslits for surface-enhanced Raman scattering. *Small*, **2009**, 5, 2876-82	11	34

26	Electrical detection of confined gap plasmons in metal–insulator–metal waveguides. *Nature Photonics*, **2009**, 3, 283-286	33.9	296
25	Symmetry breaking induced optical properties of gold open shell nanostructures. *Optics Express*, **2009**, 17, 23765-71	3.3	65
24	Fabrication and Optical Properties of Gold Semishells. *Journal of Physical Chemistry C*, **2009**, 113, 3110-3115	4.8	71
23	Fabrication, characterization, and optical properties of gold nanobowl submonolayer structures. *Langmuir*, **2009**, 25, 1822-7	4	83
22	Fano resonances in individual coherent plasmonic nanocavities. *Nano Letters*, **2009**, 9, 1663-7	11.5	594
21	Tunability of subradiant dipolar and fano-type plasmon resonances in metallic ring/disk cavities: implications for nanoscale optical sensing. *ACS Nano*, **2009**, 3, 643-52	16.7	416
20	Symmetry breaking in plasmonic nanocavities: subradiant LSPR sensing and a tunable Fano resonance. *Nano Letters*, **2008**, 8, 3983-8	11.5	847
19	The fabrication and optical property of silver nanoplates with different thicknesses. *Nanotechnology*, **2008**, 19, 325702	3.4	31
18	Local electrical detection of single nanoparticle plasmon resonance. *Nano Letters*, **2007**, 7, 703-6	11.5	30
17	Spin Injection and Detection in Semiconductors–Electrical Issues and Device Aspects. *IEEE Transactions on Electron Devices*, **2007**, 54, 933-944	2.9	13
16	Spin injection in LEDs–band in unipolar devices. *Materials Science and Engineering B: Solid-State Materials for Advanced Technology*, **2006**, 126, 155-163	3.1	19
15	Oblique Hanle measurements of InAs–GaAs quantum dot spin-light emitting diodes. *Applied Physics Letters*, **2006**, 88, 022113	3.4	38
14	Design of the tunnel contacts and the transport region of all-electrical spin-injection-detection devices. *Journal of Applied Physics*, **2006**, 99, 08S702	2.5	7
13	Design of an all-electrical spin-injection-detection device in GaAs. *Physica Status Solidi C: Current Topics in Solid State Physics*, **2006**, 3, 4172-4175		3
12	Bias-dependent spin relaxation in a Spin-LED. *Materials Science and Engineering B: Solid-State Materials for Advanced Technology*, **2006**, 126, 107-111	3.1	2
11	Spin LEDs. *Series in Materials Science and Engineering*, **2006**, 269-288		
10	Voltage-controlled spin injection in a (Ga,Mn)As–(Al,Ga)As Zener diode. *Physical Review B*, **2005**, 72,	3.3	33
9	Spin dependent transport properties in spin-LEDs: a survey **2005**,		5

8	Nuclear spin orientation by electrical spin injection in an AlxGa1xAsGaAs spin-polarized light-emitting diode. *Physical Review B*, **2005**, 72,	3.3	20
7	Efficient electrical spin injection in GaAs: A comparison between AlOx and Schottky injectors. *Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films*, **2004**, 22, 1862-1867	2.9	16
6	Spin-injection in semiconductors: materials challenges and device aspects. *Physica Status Solidi (B): Basic Research*, **2004**, 241, 1470-1476	1.3	16
5	Very high spin polarization in GaAs by injection from a (Ga,Mn)As Zener diode. *Applied Physics Letters*, **2004**, 84, 3495-3497	3.4	115
4	Electrical Spin Injection in a Ferromagnetic Metal/Insulator/Semiconductor Tunnel Heterostructure. *Journal of Superconductivity and Novel Magnetism*, **2003**, 16, 671-678		3
3	Optical investigation of electrical spin injection into semiconductors. *Physical Review B*, **2003**, 68,	3.3	117
2	Highly Efficient Room Temperature Spin Injection in a Metal-Insulator-Semiconductor Light-Emitting Diode. *Japanese Journal of Applied Physics*, **2003**, 42, L502-L504	1.4	36
1	Modeling of Ion and Water Transport in the Biological Nanopore ClyA		1