Jan Meijer

List of Publications by Year
in descending order

132 papers	6,865 citations	66343 42 h-index	62596 80 g-index
134 all docs	134 docs citations	134 times ranked	5328 citing authors

#	Article	IF	Citations
1	Spectral Emission Dependence of Tinâ€Vacancy Centers in Diamond from Thermal Processing and Chemical Functionalization. Advanced Photonics Research, 2022, 3, 2100148.	3.6	5
2	Nanometers-Thick Ferromagnetic Surface Produced by Laser Cutting of Diamond. Materials, 2022, 15, 1014.	2.9	4
3	Magnetic properties of red diamonds produced by high-temperature electron irradiation. Diamond and Related Materials, 2022, 123, 108891.	3.9	1
4	Identification and Creation of the Room-Temperature Coherently Controllable ST1 Spin Center in Diamond. ACS Photonics, 2022, 9, 1691-1699.	6.6	4
5	Image charge detection of ion bunches using a segmented, cryogenic detector. Journal of Applied Physics, 2022, 131, .	2.5	4
6	Color center formation by deterministic single ion implantation. Semiconductors and Semimetals, 2021, 104, 1-30.	0.7	1
7	Detection of biological signals from a live mammalian muscle using an early stage diamond quantum sensor. Scientific Reports, 2021, 11, 2412.	3.3	39
8	Quantum computer based on color centers in diamond. Applied Physics Reviews, 2021, 8, .	11.3	141
9	Cell specific quantitative iron mapping on brain slices by immuno-ÂµPIXE in healthy elderly and Parkinsonâ€™s disease. Acta Neuropathologica Communications, 2021, 9, 47.	5.2	26
10	Chargeâ€Assisted Engineering of Color Centers in Diamond. Physica Status Solidi (A) Applications and Materials Science, 2021, 218, 2170021.	1.8	1
11	Determining the position of a single spin relative to a metallic nanowire. Journal of Applied Physics, 2021, 129, .	2.5	3
12	Vacancy diffusion and nitrogen-vacancy center formation near the diamond surface. Applied Physics Letters, 2021, 118, .	3.3	9
13	Laser threshold magnetometry using green-light absorption by diamond nitrogen vacancies in an external cavity laser. Physical Review A, 2021, 103, .	2.5	4
14	A cavity-based optical antenna for color centers in diamond. APL Photonics, 2021, 6, .	5.7	9
15	Weak Electron Irradiation Suppresses the Anomalous Magnetization of Nâ€Doped Diamond Crystals. Physica Status Solidi (B): Basic Research, 2021, 258, 2100395.	1.5	3
16	Magnetic field and angle-dependent photoluminescence of a fiber-coupled nitrogen vacancy rich diamond. Journal of Applied Physics, 2021, 130, .	2.5	8
17	Robust nuclear hyperpolarization driven by strongly coupled nitrogen vacancy centers. Journal of Applied Physics, 2021, 130, 104301.	2.5	2
18	Chargeâ€Assisted Engineering of Color Centers in Diamond. Physica Status Solidi (A) Applications and Materials Science, 2021, 218, 2000614.	1.8	13

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19	Color centers with exceptional properties in diamond. , 2021, , .		0
20	Spectroscopic investigations of negatively charged tin-vacancy centres in diamond. New Journal of Physics, 2020, 22, 013048.	2.9	62
21	High NV density in a pink CVD diamond grown with N2O addition. Carbon, 2020, 170, 421-429.	10.3	29
22	Organ burden of inhaled nanoceria in a 2-year low-dose exposure study: dump or depot?. Nanotoxicology, 2020, 14, 1011-1012.	3.0	2
23	Single artificial atoms in silicon emitting at telecom wavelengths. Nature Electronics, 2020, 3, 738-743.	26.0	72
24	Charge-State Tuning of Single SnV Centers in Diamond. ACS Photonics, 2020, 7, 3376-3385.	6.6	12
25	Fluorine-based color centers in diamond. Scientific Reports, 2020, 10, 21537.	3.3	6
26	Method of full polarization control of microwave fields in a scalable transparent structure for spin manipulation. Journal of Applied Physics, 2020, 128, .	2.5	4
27	Isotropic Scalar Quantum Sensing of Magnetic Fields for Industrial Application. Advanced Quantum Technologies, 2020, 3, 2000037.	3.9	9
28	Organ burden of inhaled nanoceria in a 2-year low-dose exposure study: dump or depot?. Nanotoxicology, 2020, 14, 554-576.	3.0	16
29	Nanoscale ion implantation using focussed highly charged ions. New Journal of Physics, 2020, 22, 083028.	2.9	10
30	Vectorial calibration of superconducting magnets with a quantum magnetic sensor. Review of Scientific Instruments, 2020, 91, 125003.	1.3	5
31	All optical readout scheme for photoluminescence based magnetic field sensors. , 2020, , .		0
32	Image charge detection statistics relevant for deterministic ion implantation. Journal Physics D: Applied Physics, 2019, 52, 305103.	2.8	11
33	Gold Nanoparticles as Boron Carriers for Boron Neutron Capture Therapy: Synthesis, Radiolabelling and In vivo Evaluation. Molecules, 2019, 24, 3609.	3.8	38
34	Coulomb-driven single defect engineering for scalable qubits and spin sensors in diamond. Nature Communications, 2019, 10, 4956.	12.8	81
35	Colour centre generation in diamond for quantum technologies. Nanophotonics, 2019, 8, 1889-1906.	6.0	56
36	Probing phase transitions in a soft matter system using a single spin quantum sensor. New Journal of Physics, 2019, 21, 103036.	2.9	2

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37	Controlling the fluorescence properties of nitrogen vacancy centers in nanodiamonds. Nanoscale, 2019, 11, 1770-1783.	5.6	35
38	Unconventional Magnetization below 25â€‰K in Nitrogen-doped Diamond provides hints for the existence of Superconductivity and Superparamagnetism. Scientific Reports, 2019, 9, 8743.	3.3	9
39	Publisher's Note: Competition between electric field and magnetic field noise in the decoherence of a single spin in diamond [Phys. Rev. B 93 , 024305 (2016)]. Physical Review B, 2019, 99, .	3.2	1
40	Fiber-Optic Quantum Thermometry with Germanium-Vacancy Centers in Diamond. ACS Photonics, 2019, 6, 1690-1693.	6.6	26
41	Simultaneous Quantification and Visualization of Titanium Dioxide Nanomaterial Uptake at the Single Cell Level in an In Vitro Model of the Human Small Intestine. Small Methods, 2019, 3, 1800540.	8.6	8
42	Investigation of Ion Channeling and Scattering for Singleâ€Ion Implantation with High Spatial Resolution. Physica Status Solidi (A) Applications and Materials Science, 2019, 216, 1900528.	1.8	11
43	Investigation of Ion Channeling and Scattering for Singleâ€Ion Implantation with High Spatial Resolution. Physica Status Solidi (A) Applications and Materials Science, 2019, 216, 1970069.	1.8	2
44	Spin measurements of NV centers coupled to a photonic crystal cavity. APL Photonics, 2019, 4, .	5.7	15
45	Highly transparent conductors for optical and microwave access to spin-based quantum systems. Npj Quantum Information, 2019, 5, .	6.7	8
46	Contributed Review: Camera-limits for wide-field magnetic resonance imaging with a nitrogen-vacancy spin sensor. Review of Scientific Instruments, 2018, 89, 031501.	1.3	26
47	Nitrogen implantation with a scanning electron microscope. Scientific Reports, 2018, 8, 32.	3.3	10
48	Optical properties of an ensemble of G-centers in silicon. Physical Review B, 2018, 97, .	3.2	49
49	Creation of Quantum Centers in Silicon using Spatial Selective Ion Implantation of high Lateral Resolution. , 2018, , .		3
50	Single-Photon Emitters in Lead-Implanted Single-Crystal Diamond. ACS Photonics, 2018, 5, 4864-4871.	6.6	66
51	Implantation of defined activities of phosphorus 32 with reduced target damage. Review of Scientific Instruments, 2018, 89, 113304.	1.3	1
52	Uptake and molecular impact of aluminum-containing nanomaterials on human intestinal caco-2 cells. Nanotoxicology, 2018, 12, 992-1013.	3.0	24
53	Wide-Field Imaging of Superconductor Vortices with Electron Spins in Diamond. Physical Review Applied, 2018, 10, .	3.8	36
54	Screening and engineering of colour centres in diamond. Journal Physics D: Applied Physics, 2018, 51, 483002.	2.8	66

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55	Coherent control of solid state nuclear spin nano-ensembles. Npj Quantum Information, 2018, 4, .	6.7	22
56	Detection of magnetic dipolar coupling of water molecules at the nanoscale using quantum magnetometry. Physical Review B, 2018, 97, .	3.2	11
57	Investigation of room temperature multispin-assisted bulk diamond ¹³C hyperpolarization at low magnetic fields. Journal of Physics Condensed Matter, 2018, 30, 305803.	1.8	5
58	Intrinsically ³²Pâ€Labeled Diamond Nanoparticles for In Vivo Imaging and Quantification of Their Biodistribution in Chicken Embryos. Advanced Functional Materials, 2018, 28, 1802873.	14.9	16
59	Detection of ZrO2 Nanoparticles in Lung Tissue Sections by Time-of-Flight Secondary Ion Mass Spectrometry and Ion Beam Microscopy. Nanomaterials, 2018, 8, 44.	4.1	14
60	Precision temperature sensing in the presence of magnetic field noise and <i>vice-versa</i> using nitrogen-vacancy centers in diamond. Applied Physics Letters, 2018, 113, .	3.3	35
61	Detection of small bunches of ions using image charges. Scientific Reports, 2018, 8, 9781.	3.3	26
62	Characterization of aluminum, aluminum oxide and titanium dioxide nanomaterials using a combination of methods for particle surface and size analysis. RSC Advances, 2018, 8, 14377-14388.	3.6	36
63	Tin-vacancy in diamonds for luminescent thermometry. Applied Physics Letters, 2018, 112, .	3.3	58
64	Fabrication and electrical transport properties of embedded graphite microwires in a diamond matrix. Journal Physics D: Applied Physics, 2017, 50, 145301.	2.8	2
65	Investigation of the graphitization process of ion-beam irradiated diamond using ellipsometry, Raman spectroscopy and electrical transport measurements. Carbon, 2017, 121, 512-517.	10.3	16
66	Submillihertz magnetic spectroscopy performed with a nanoscale quantum sensor. Science, 2017, 356, 832-837.	12.6	231
67	It takes more than a coating to get nanoparticles through the intestinal barrier in vitro. European Journal of Pharmaceutics and Biopharmaceutics, 2017, 118, 21-29.	4.3	29
68	Single-Photon-Emitting Optical Centers in Diamond Fabricated upon Sn Implantation. ACS Photonics, 2017, 4, 2580-2586.	6.6	86
69	Dosimetric Quantification of Coating-Related Uptake of Silver Nanoparticles. Langmuir, 2017, 33, 13087-13097.	3.5	17
70	Impact of an Artificial Digestion Procedure on Aluminum-Containing Nanomaterials. Langmuir, 2017, 33, 10726-10735.	3.5	45
71	Protecting a Diamond Quantum Memory by Charge State Control. Nano Letters, 2017, 17, 5931-5937.	9.1	66
72	Nanocapsules for the co-delivery of selol and doxorubicin to breast adenocarcinoma 4T1 cells in vitro. Artificial Cells, Nanomedicine and Biotechnology, 2017, 46, 1-11.	2.8	10

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73	Functionalized Akiyama tips for magnetic force microscopy measurements. Measurement Science and Technology, 2017, 28, 125401.	2.6	13
74	Bright optical centre in diamond with narrow, highly polarised and nearly phonon-free fluorescence at room temperature. New Journal of Physics, 2017, 19, 053008.	2.9	22
75	Nanometer collimation enhancement of ion beams using channeling effects in track-etched mica capillaries. Scientific Reports, 2017, 7, 17081.	3.3	5
76	Optically induced cross relaxation via nitrogen-related defects for bulk diamond <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mmultiscripts><mml:mi mathvariant="normal">C</mml:mi><mml:mprescripts /><mml:none /><mml:mn>13</mml:mn></mml:mmultiscripts></mml:math> hyperpolarization. Physical Review B, 2017, 96, .	3.2	35
77	Active and fast charge-state switching of single NV centres in diamond by in-plane Al-Schottky junctions. Beilstein Journal of Nanotechnology, 2016, 7, 1727-1735.	2.8	6
78	Determining the internal quantum efficiency of shallow-implanted nitrogen-vacancy defects in bulk diamond. Optics Express, 2016, 24, 27715.	3.4	27
79	Strong out-of-plane magnetic anisotropy in ion irradiated anatase TiO2 thin films. AIP Advances, 2016, 6, 125009.	1.3	16
80	Production of bulk NV centre arrays by shallow implantation and diamond CVD overgrowth. Physica Status Solidi (A) Applications and Materials Science, 2016, 213, 2594-2600.	1.8	21
81	Identification of a possible superconducting transition above room temperature in natural graphite crystals. New Journal of Physics, 2016, 18, 113041.	2.9	51
82	Competition between electric field and magnetic field noise in the decoherence of a single spin in diamond. Physical Review B, 2016, 93, .	3.2	69
83	Wide bandwidth instantaneous radio frequency spectrum analyzer based on nitrogen vacancy centers in diamond. Applied Physics Letters, 2015, 107, .	3.3	34
84	Spectroscopy of Surface-Induced Noise Using Shallow Spins in Diamond. Physical Review Letters, 2015, 114, 017601.	7.8	177
85	Study of the negative magneto-resistance of single proton-implanted lithium-doped ZnO microwires. Journal of Physics Condensed Matter, 2015, 27, 256002.	1.8	8
86	Nanometer-scale isotope analysis of bulk diamond by atom probe tomography. Diamond and Related Materials, 2015, 60, 60-65.	3.9	8
87	Active charge state control of single NV centres in diamond by in-plane Al-Schottky junctions. Scientific Reports, 2015, 5, 12160.	3.3	59
88	Nanoimplantation and Purcell enhancement of single nitrogen-vacancy centers in photonic crystal cavities in diamond. Applied Physics Letters, 2015, 106, .	3.3	68
89	Probing molecular dynamics at the nanoscale via an individual paramagnetic centre. Nature Communications, 2015, 6, 8527.	12.8	81
90	Temperature dependent creation of nitrogen-vacancy centers in single crystal CVD diamond layers. Diamond and Related Materials, 2015, 51, 55-60.	3.9	39

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91	High-fidelity spin entanglement using optimal control. Nature Communications, 2014, 5, 3371.	12.8	244
92	Stark shift and field ionization of arsenic donors in 28Si-silicon-on-insulator structures. Applied Physics Letters, 2014, 104, .	3.3	17
93	Nanoscale nuclear magnetic resonance with a 1.9-nm-deep nitrogen-vacancy sensor. Applied Physics Letters, 2014, 104, 033102.	3.3	133
94	Statistical investigations on nitrogen-vacancy center creation. Applied Physics Letters, 2014, 104, .	3.3	34
95	Single-proton spin detection by diamond magnetometry. Science, 2014, 346, .	12.6	13
96	Addressing Single Nitrogen-Vacancy Centers in Diamond with Transparent in-Plane Gate Structures. Nano Letters, 2014, 14, 2359-2364.	9.1	45
97	Nuclear magnetic resonance spectroscopy with single spin sensitivity. Nature Communications, 2014, 5, 4703.	12.8	211
98	Room-temperature entanglement between single defect spins in diamond. Nature Physics, 2013, 9, 139-143.	16.7	353
99	Nuclear Magnetic Resonance Spectroscopy on a (5-Nanometer) ³ Sample Volume. Science, 2013, 339, 561-563.	12.6	674
100	Maskless and targeted creation of arrays of colour centres in diamond using focused ion beam technology. Physica Status Solidi (A) Applications and Materials Science, 2013, 210, 2055-2059.	1.8	47
101	Increasing the creation yield of shallow single defects in diamond by surface plasma treatment. Applied Physics Letters, 2013, 103, .	3.3	28
102	Dark state photophysics of nitrogenâ€“vacancy centres in diamond. New Journal of Physics, 2012, 14, 123002.	2.9	20
103	Tuning a Spin Bath through the Quantum-Classical Transition. Physical Review Letters, 2012, 108, 200402.	7.8	52
104	Spin properties of very shallow nitrogen vacancy defects in diamond. Physical Review B, 2012, 86, .	3.2	159
105	Super-resolution Fluorescence Quenching Microscopy of Graphene. ACS Nano, 2012, 6, 9175-9181.	14.6	52
106	Diamond nanophotonics. Beilstein Journal of Nanotechnology, 2012, 3, 895-908.	2.8	31
107	Rare-earth substituted HfO2 thin films grown by metalorganic chemical vapor deposition. Thin Solid Films, 2012, 520, 4512-4517.	1.8	9
108	Engineered arrays of nitrogen-vacancy color centers in diamond based on implantation of CN^{âˆ'}molecules through nanoapertures. New Journal of Physics, 2011, 13, 025014.	2.9	75

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109	Diamond based light-emitting diode for visible single-photon emission at room temperature. Applied Physics Letters, 2011, 99, .	3.3	85
110	Single photon emitters based on Ni/Si related defects in single crystalline diamond. Applied Physics B: Lasers and Optics, 2011, 102, 451-458.	2.2	29
111	Creation of colour centres in diamond by collimated ionâ€implantation through nanoâ€channels in mica. Physica Status Solidi (A) Applications and Materials Science, 2011, 208, 2017-2022.	1.8	52
112	Nanofabricated solid immersion lenses registered to single emitters in diamond. Applied Physics Letters, 2011, 98, .	3.3	94
113	Nanoscale Engineering and Optical Addressing of Single Spins in Diamond. Small, 2010, 6, 2117-2121.	10.0	100
114	Quantum register based on coupled electron spins in a room-temperature solid. Nature Physics, 2010, 6, 249-253.	16.7	392
115	Creation efficiency of nitrogen-vacancy centres in diamond. New Journal of Physics, 2010, 12, 065017.	2.9	257
116	Engineering single photon emitters by ion implantation in diamond. Applied Physics Letters, 2009, 95, 181109.	3.3	51
117	Deterministic Ultracold Ion Source Targeting the Heisenberg Limit. Physical Review Letters, 2009, 102, 070501.	7.8	60
118	Towards the implanting of ions and positioning of nanoparticles with nm spatial resolution. Applied Physics A: Materials Science and Processing, 2008, 91, 567-571.	2.3	64
119	n-type diamond produced by MeV lithium implantation in channeling direction. Diamond and Related Materials, 2008, 17, 1933-1935.	3.9	6
120	H+ ion-implantation energy dependence of electronic transport properties in the MeV range in n-type silicon wafers using frequency-domain photocarrier radiometry. Journal of Applied Physics, 2007, 101, 123109.	2.5	19
121	Room-temperature coherent coupling of single spins in diamond. Nature Physics, 2006, 2, 408-413.	16.7	496
122	Concept of deterministic single ion doping with sub-nm spatial resolution. Applied Physics A: Materials Science and Processing, 2006, 83, 321-327.	2.3	59
123	Intelligent anvils applied to experimental investigations: state-of-the-art. High Pressure Research, 2006, 26, 251-265.	1.2	9
124	Generation of single color centers by focused nitrogen implantation. Applied Physics Letters, 2005, 87, 261909.	3.3	215
125	Highly effective p-type doping of diamond by MeV-ion implantation of boron. Diamond and Related Materials, 2004, 13, 1822-1825.	3.9	42
126	Quantitative high resolution cathodoluminescence spectroscopy of diagenetic and hydrothermal dolomites. Sedimentary Geology, 2001, 140, 191-199.	2.1	28

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127	Diamond Pressure and Temperature Sensors for High-Pressure High-Temperature Applications. Physica Status Solidi A, 2001, 185, 59-64.	1.7	25
128	Synthesis of silicide structures by high energy ion projection. Microelectronic Engineering, 2000, 53, 385-388.	2.4	2
129	Stencil masks for high energy ion projection. Microelectronic Engineering, 1999, 46, 489-492.	2.4	8
130	Application of Proton Microprobe and 12C-Rutherford Backscattering Spectroscopy to the Identification of Hg(II)-Cations Sorbed by Granite Minerals. Radiochimica Acta, 1998, 83, 43-48.	1.2	7
131	Optimization of material and shape for nuclear microprobe apertures. Nuclear Instruments & Methods in Physics Research B, 1996, 114, 172-184.	1.4	11
132	Analytical techniques with a nuclear microprobe. Fresenius' Journal of Analytical Chemistry, 1995, 353, 585-588.	1.5	2