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	Nuclear Magnetic Resonance Spectroscopy on a (5-Nanometer) ³ Sample Volume. Science, 2013, 339, 561-563.	12.6	674
2	Room-temperature coherent coupling of single spins in diamond. Nature Physics, 2006, 2, 408-413.	16.7	496
3	Quantum register based on coupled electron spins in a room-temperature solid. Nature Physics, 2010, 6, 249-253.	16.7	392
4	Room-temperature entanglement between single defect spins in diamond. Nature Physics, 2013, 9, 139-143.	16.7	353
5	Creation efficiency of nitrogen-vacancy centres in diamond. New Journal of Physics, 2010, 12, 065017.	2.9	257
6	High-fidelity spin entanglement using optimal control. Nature Communications, 2014, 5, 3371.	12.8	244
7	Submillihertz magnetic spectroscopy performed with a nanoscale quantum sensor. Science, 2017, 356, 832-837.	12.6	231
8	Generation of single color centers by focused nitrogen implantation. Applied Physics Letters, 2005, 87, 261909.	3.3	215
9	Nuclear magnetic resonance spectroscopy with single spin sensitivity. Nature Communications, 2014, 5, 4703.	12.8	211
10	Spectroscopy of Surface-Induced Noise Using Shallow Spins in Diamond. Physical Review Letters, 2015, 114, 017601.	7.8	177
11	Spin properties of very shallow nitrogen vacancy defects in diamond. Physical Review B, 2012, 86, .	3.2	159
12	Quantum computer based on color centers in diamond. Applied Physics Reviews, 2021, 8, .	11.3	141
13	Nanoscale nuclear magnetic resonance with a 1.9-nm-deep nitrogen-vacancy sensor. Applied Physics Letters, 2014, 104, 033102.	3.3	133
14	Nanoscale Engineering and Optical Addressing of Single Spins in Diamond. Small, 2010, 6, 2117-2121.	10.0	100
15	Nanofabricated solid immersion lenses registered to single emitters in diamond. Applied Physics Letters, 2011, 98, .	3.3	94
16	Single-Photon-Emitting Optical Centers in Diamond Fabricated upon Sn Implantation. ACS Photonics, 2017, 4, 2580-2586.	6.6	86
17	Diamond based light-emitting diode for visible single-photon emission at room temperature. Applied Physics Letters, 2011, 99, .	3.3	85
18	Probing molecular dynamics at the nanoscale via an individual paramagnetic centre. Nature Communications, 2015, 6, 8527.	12.8	81

#	ARTICLE	IF	CITATIONS
19	Coulomb-driven single defect engineering for scalable qubits and spin sensors in diamond. Nature Communications, 2019, 10, 4956.	12.8	81
20	Engineered arrays of nitrogen-vacancy color centers in diamond based on implantation of CN^{â^'}molecules through nanoapertures. New Journal of Physics, 2011, 13, 025014.	2.9	75
21	Single artificial atoms in silicon emitting at telecom wavelengths. Nature Electronics, 2020, 3, 738-743.	26.0	72
22	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
23	Nanoimplantation and Purcell enhancement of single nitrogen-vacancy centers in photonic crystal cavities in diamond. Applied Physics Letters, 2015, 106, .	3.3	68
24	Protecting a Diamond Quantum Memory by Charge State Control. Nano Letters, 2017, 17, 5931-5937.	9.1	66
25	Single-Photon Emitters in Lead-Implanted Single-Crystal Diamond. ACS Photonics, 2018, 5, 4864-4871.	6.6	66
26	Screening and engineering of colour centres in diamond. Journal Physics D: Applied Physics, 2018, 51, 483002.	2.8	66
27	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
28	Spectroscopic investigations of negatively charged tin-vacancy centres in diamond. New Journal of Physics, 2020, 22, 013048.	2.9	62
29	Deterministic Ultracold Ion Source Targeting the Heisenberg Limit. Physical Review Letters, 2009, 102, 070501.	7.8	60
30	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
31	Active charge state control of single NV centres in diamond by in-plane Al-Schottky junctions. Scientific Reports, 2015, 5, 12160.	3.3	59
32	Tin-vacancy in diamonds for luminescent thermometry. Applied Physics Letters, 2018, 112, .	3.3	58
33	Colour centre generation in diamond for quantum technologies. Nanophotonics, 2019, 8, 1889-1906.	6.0	56
34	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
35	Tuning a Spin Bath through the Quantum-Classical Transition. Physical Review Letters, 2012, 108, 200402.	7.8	52
36	Super-resolution Fluorescence Quenching Microscopy of Graphene. ACS Nano, 2012, 6, 9175-9181.	14.6	52

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37	Engineering single photon emitters by ion implantation in diamond. Applied Physics Letters, 2009, 95, 181109.	3.3	51
38	Identification of a possible superconducting transition above room temperature in natural graphite crystals. New Journal of Physics, 2016, 18, 113041.	2.9	51
39	Optical properties of an ensemble of G-centers in silicon. Physical Review B, 2018, 97, .	3.2	49
40	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
41	Addressing Single Nitrogen-Vacancy Centers in Diamond with Transparent in-Plane Gate Structures. Nano Letters, 2014, 14, 2359-2364.	9.1	45
42	Impact of an Artificial Digestion Procedure on Aluminum-Containing Nanomaterials. Langmuir, 2017, 33, 10726-10735.	3.5	45
43	Highly effective p-type doping of diamond by MeV-ion implantation of boron. Diamond and Related Materials, 2004, 13, 1822-1825.	3.9	42
44	Temperature dependent creation of nitrogen-vacancy centers in single crystal CVD diamond layers. Diamond and Related Materials, 2015, 51, 55-60.	3.9	39
45	Detection of biological signals from a live mammalian muscle using an early stage diamond quantum sensor. Scientific Reports, 2021, 11, 2412.	3.3	39
46	Gold Nanoparticles as Boron Carriers for Boron Neutron Capture Therapy: Synthesis, Radiolabelling and In vivo Evaluation. Molecules, 2019, 24, 3609.	3.8	38
47	Wide-Field Imaging of Superconductor Vortices with Electron Spins in Diamond. Physical Review Applied, 2018, 10, .	3.8	36
48	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
49	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
50	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
51	Controlling the fluorescence properties of nitrogen vacancy centers in nanodiamonds. Nanoscale, 2019, 11, 1770-1783.	5.6	35
52	Statistical investigations on nitrogen-vacancy center creation. Applied Physics Letters, 2014, 104, .	3.3	34
53	Wide bandwidth instantaneous radio frequency spectrum analyzer based on nitrogen vacancy centers in diamond. Applied Physics Letters, 2015, 107, .	3.3	34
54	Diamond nanophotonics. Beilstein Journal of Nanotechnology, 2012, 3, 895-908.	2.8	31

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55	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
56	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
57	High NV density in a pink CVD diamond grown with N2O addition. Carbon, 2020, 170, 421-429.	10.3	29
58	Quantitative high resolution cathodoluminescence spectroscopy of diagenetic and hydrothermal dolomites. Sedimentary Geology, 2001, 140, 191-199.	2.1	28
59	Increasing the creation yield of shallow single defects in diamond by surface plasma treatment. Applied Physics Letters, 2013, 103, .	3.3	28
60	Determining the internal quantum efficiency of shallow-implanted nitrogen-vacancy defects in bulk diamond. Optics Express, 2016, 24, 27715.	3.4	27
61	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
62	Detection of small bunches of ions using image charges. Scientific Reports, 2018, 8, 9781.	3.3	26
63	Fiber-Optic Quantum Thermometry with Germanium-Vacancy Centers in Diamond. ACS Photonics, 2019, 6, 1690-1693.	6.6	26
64	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
65	Diamond Pressure and Temperature Sensors for High-Pressure High-Temperature Applications. Physica Status Solidi A, 2001, 185, 59-64.	1.7	25
66	Uptake and molecular impact of aluminum-containing nanomaterials on human intestinal caco-2 cells. Nanotoxicology, 2018, 12, 992-1013.	3.0	24
67	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
68	Coherent control of solid state nuclear spin nano-ensembles. Npj Quantum Information, 2018, 4, .	6.7	22
69	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
70	Dark state photophysics of nitrogenâ€"vacancy centres in diamond. New Journal of Physics, 2012, 14, 123002.	2.9	20
71	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
72	Stark shift and field ionization of arsenic donors in 28Si-silicon-on-insulator structures. Applied Physics Letters, 2014, 104, .	3.3	17

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73	Dosimetric Quantification of Coating-Related Uptake of Silver Nanoparticles. Langmuir, 2017, 33, 13087-13097.	3.5	17
74	Strong out-of-plane magnetic anisotropy in ion irradiated anatase TiO2 thin films. AIP Advances, 2016, 6, 125009.	1.3	16
75	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
76	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
77	Organ burden of inhaled nanoceria in a 2-year low-dose exposure study: dump or depot?. Nanotoxicology, 2020, 14, 554-576.	3.0	16
78	Spin measurements of NV centers coupled to a photonic crystal cavity. APL Photonics, 2019, 4, .	5.7	15
79	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
80	Single-proton spin detection by diamond magnetometry. Science, 2014, 346, .	12.6	13
81	Functionalized Akiyama tips for magnetic force microscopy measurements. Measurement Science and Technology, 2017, 28, 125401.	2.6	13
82	Chargeâ€Assisted Engineering of Color Centers in Diamond. Physica Status Solidi (A) Applications and Materials Science, 2021, 218, 2000614.	1.8	13
83	Charge-State Tuning of Single SnV Centers in Diamond. ACS Photonics, 2020, 7, 3376-3385.	6.6	12
84	Optimization of material and shape for nuclear microprobe apertures. Nuclear Instruments & Methods in Physics Research B, 1996, 114, 172-184.	1.4	11
85	Detection of magnetic dipolar coupling of water molecules at the nanoscale using quantum magnetometry. Physical Review B, 2018, 97, .	3.2	11
86	Image charge detection statistics relevant for deterministic ion implantation. Journal Physics D: Applied Physics, 2019, 52, 305103.	2.8	11
87	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
88	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
89	Nitrogen implantation with a scanning electron microscope. Scientific Reports, 2018, 8, 32.	3.3	10
90	Nanoscale ion implantation using focussed highly charged ions. New Journal of Physics, 2020, 22, 083028.	2.9	10

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91	Intelligent anvils applied to experimental investigations: state-of-the-art. High Pressure Research, 2006, 26, 251-265.	1.2	9
92	Rare-earth substituted HfO2 thin films grown by metalorganic chemical vapor deposition. Thin Solid Films, 2012, 520, 4512-4517.	1.8	9
93	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
94	Isotropic Scalar Quantum Sensing of Magnetic Fields for Industrial Application. Advanced Quantum Technologies, 2020, 3, 2000037.	3.9	9
95	Vacancy diffusion and nitrogen-vacancy center formation near the diamond surface. Applied Physics Letters, 2021, 118, .	3.3	9
96	A cavity-based optical antenna for color centers in diamond. APL Photonics, 2021, 6, .	5.7	9
97	Stencil masks for high energy ion projection. Microelectronic Engineering, 1999, 46, 489-492.	2.4	8
98	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
99	Nanometer-scale isotope analysis of bulk diamond by atom probe tomography. Diamond and Related Materials, 2015, 60, 60-65.	3.9	8
100	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
101	Highly transparent conductors for optical and microwave access to spin-based quantum systems. Npj Quantum Information, 2019, 5, .	6.7	8
102	Magnetic field and angle-dependent photoluminescence of a fiber-coupled nitrogen vacancy rich diamond. Journal of Applied Physics, 2021, 130, .	2.5	8
103	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
104	n-type diamond produced by MeV lithium implantation in channeling direction. Diamond and Related Materials, 2008, 17, 1933-1935.	3.9	6
105	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
106	Fluorine-based color centers in diamond. Scientific Reports, 2020, 10, 21537.	3.3	6
107	Nanometer collimation enhancement of ion beams using channeling effects in track-etched mica capillaries. Scientific Reports, 2017, 7, 17081.	3.3	5
108	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

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109	Vectorial calibration of superconducting magnets with a quantum magnetic sensor. Review of Scientific Instruments, 2020, 91, 125003.	1.3	5
110	Spectral Emission Dependence of Tinâ€Vacancy Centers in Diamond from Thermal Processing and Chemical Functionalization. Advanced Photonics Research, 2022, 3, 2100148.	3.6	5
111	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
112	Laser threshold magnetometry using green-light absorption by diamond nitrogen vacancies in an external cavity laser. Physical Review A, 2021, 103, .	2.5	4
113	Nanometers-Thick Ferromagnetic Surface Produced by Laser Cutting of Diamond. Materials, 2022, 15, 1014.	2.9	4
114	Identification and Creation of the Room-Temperature Coherently Controllable ST1 Spin Center in Diamond. ACS Photonics, 2022, 9, 1691-1699.	6.6	4
115	Image charge detection of ion bunches using a segmented, cryogenic detector. Journal of Applied Physics, 2022, 131, .	2.5	4
116	Creation of Quantum Centers in Silicon using Spatial Selective Ion Implantation of high Lateral Resolution. , 2018, , .		3
117	Determining the position of a single spin relative to a metallic nanowire. Journal of Applied Physics, 2021, 129, .	2.5	3
118	Weak Electron Irradiation Suppresses the Anomalous Magnetization of Nâ€Doped Diamond Crystals. Physica Status Solidi (B): Basic Research, 2021, 258, 2100395.	1.5	3
119	Analytical techniques with a nuclear microprobe. Fresenius' Journal of Analytical Chemistry, 1995, 353, 585-588.	1.5	2
120	Synthesis of silicide structures by high energy ion projection. Microelectronic Engineering, 2000, 53, 385-388.	2.4	2
121	Fabrication and electrical transport properties of embedded graphite microwires in a diamond matrix. Journal Physics D: Applied Physics, 2017, 50, 145301.	2.8	2
122	Probing phase transitions in a soft matter system using a single spin quantum sensor. New Journal of Physics, 2019, 21, 103036.	2.9	2
123	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
124	Organ burden of inhaled nanoceria in a 2-year low-dose exposure study: dump or depot?. Nanotoxicology, 2020, 14, 1011-1012.	3.0	2
125	Robust nuclear hyperpolarization driven by strongly coupled nitrogen vacancy centers. Journal of Applied Physics, 2021, 130, 104301.	2.5	2
126	Implantation of defined activities of phosphorus 32 with reduced target damage. Review of Scientific Instruments, 2018, 89, 113304.	1.3	1

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127	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
128	Color center formation by deterministic single ion implantation. Semiconductors and Semimetals, 2021, 104, 1-30.	0.7	1
129	Chargeâ€Assisted Engineering of Color Centers in Diamond. Physica Status Solidi (A) Applications and Materials Science, 2021, 218, 2170021.	1.8	1
130	Magnetic properties of red diamonds produced by high-temperature electron irradiation. Diamond and Related Materials, 2022, 123, 108891.	3.9	1
131	Color centers with exceptional properties in diamond. , 2021, , .		0
132	All optical readout scheme for photoluminescence based magnetic field sensors. , 2020, , .		0