

Hirofumi Tanaka

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

96
papers

1,499
citations

24
h-index

33
g-index

106
ext. papers

1,697
ext. citations

4.8
avg. IF

4.29
L-index

#	Paper	IF	Citations
96	Emergence of In-Materio Intelligence from an Incidental Structure of a Single-Walled Carbon Nanotube/porphyrin Polyoxometalate Random Network. <i>Advanced Intelligent Systems</i> , 2022 , 4, 2270014	6	0
95	Crossover point of the field effect transistor and interconnect applications in turbostratic multilayer graphene nanoribbon channel. <i>Scientific Reports</i> , 2021 , 11, 10206	4.9	2
94	Performance of Ag/Ag ₂ S core-shell nanoparticle-based random network reservoir computing device. <i>Japanese Journal of Applied Physics</i> , 2021 , 60, SCCF02	1.4	2
93	Room temperature demonstration of in-materio reservoir computing for optimizing Boolean function with single-walled carbon nanotube/porphyrin-polyoxometalate composite. <i>Applied Physics Express</i> , 2021 , 14, 105003	2.4	1
92	In-Materio Reservoir Computing in a Sulfonated Polyaniline Network. <i>Advanced Materials</i> , 2021 , 33, e2102688	11	11
91	Observation of Cu Spin Fluctuations in High- Cuprate Superconductor Nanoparticles Investigated by Muon Spin Relaxation.. <i>Nanomaterials</i> , 2021 , 11,	5.4	1
90	Variable Range Hopping Resistivity in La _{2-x} Sr _x CuO ₄ Nanoparticles Evaluated by Four Point Probe Method. <i>Key Engineering Materials</i> , 2020 , 860, 142-147	0.4	2
89	Frequency dependence dielectrophoresis technique for bridging graphene nanoribbons. <i>Applied Physics Express</i> , 2020 , 13, 101004	2.4	1
88	Control of the neuromorphic learning behavior based on the aggregation of thiol-protected Ag-Ag ₂ S core-shell nanoparticles. <i>Japanese Journal of Applied Physics</i> , 2020 , 59, 015001	1.4	3
87	Wirelessly powered dielectrophoresis of metal oxide particles using spark-gap Tesla coil. <i>Electrophoresis</i> , 2020 , 41, 2159	3.6	2
86	Controllable synthesis of MoS ₂ /graphene low-dimensional nanocomposites and their electrical properties. <i>Applied Surface Science</i> , 2020 , 504, 144193	6.7	6
85	Facile preparation of hybrid thin films composed of spin-crossover nanoparticles and carbon nanotubes for electrical memory devices. <i>Dalton Transactions</i> , 2019 , 48, 7074-7079	4.3	12
84	Growth of Free-Standing La _{2-x} Sr _x CuO ₄ Nanoparticles. <i>Materials Science Forum</i> , 2019 , 966, 357-362	0.4	2
83	Three site molecular orbital controlled single-molecule rectifiers based on perpendicularly linked porphyrin-imide dyads. <i>Nanoscale</i> , 2019 , 11, 22724-22729	7.7	3
82	Effects of radical initiators, polymerization inhibitors, and other agents on the sonochemical unzipping of double-walled carbon nanotubes. <i>Japanese Journal of Applied Physics</i> , 2018 , 57, 03ED01	1.4	2
81	Self-assembly and ring-opening metathesis polymerization of cyclic conjugated molecules on highly ordered pyrolytic graphite. <i>Chemical Communications</i> , 2018 , 54, 5546-5549	5.8	8
80	Recent progress on fabrication of memristor and transistor-based neuromorphic devices for high signal processing speed with low power consumption. <i>Japanese Journal of Applied Physics</i> , 2018 , 57, 03EA06	1.4	24

79	A molecular neuromorphic network device consisting of single-walled carbon nanotubes complexed with polyoxometalate. <i>Nature Communications</i> , 2018 , 9, 2693	17.4	56
78	Energy gap opening by crossing drop cast single-layer graphene nanoribbons. <i>Nanotechnology</i> , 2018 , 29, 315705	3.4	6
77	Electric property measurement of free-standing SrTiO ₃ nanoparticles assembled by dielectrophoresis. <i>Japanese Journal of Applied Physics</i> , 2018 , 57, 06HE07	1.4	6
76	Synthesis of very narrow multilayer graphene nanoribbon with turbostratic stacking. <i>Applied Physics Letters</i> , 2017 , 110, 201901	3.4	13
75	Development of haptic based piezoresistive artificial fingertip: Toward efficient tactile sensing systems for humanoids. <i>Materials Science and Engineering C</i> , 2017 , 77, 1098-1103	8.3	15
74	Tuning the electrical property of a single layer graphene nanoribbon by adsorption of planar molecular nanoparticles. <i>Nanotechnology</i> , 2017 , 28, 175704	3.4	6
73	Fabrication of piezoresistive based pressure sensor via purified and functionalized CNTs/PDMS nanocomposite: Toward development of haptic sensors. <i>Sensors and Actuators A: Physical</i> , 2017 , 266, 158-165	3.9	19
72	Development of Frequency Based Taste Receptors Using Bioinspired Glucose Nanobiosensor. <i>Scientific Reports</i> , 2017 , 7, 1623	4.9	7
71	Enhancement of glucose oxide electron-transfer mechanism in glucose biosensor via optimum physical chemistry of functionalized carbon nanotubes. <i>Reviews in Chemical Engineering</i> , 2017 , 33,	5	6
70	Diameter dependence of longitudinal unzipping of single-walled carbon nanotube to obtain graphene nanoribbon. <i>Japanese Journal of Applied Physics</i> , 2017 , 56, 06GG12	1.4	6
69	Coadsorption of Tb(III)Porphyrin Double-decker Single-molecule Magnets in a Porous Molecular Network: Toward Controlled Alignment of Single-molecule Magnets on a Carbon Surface. <i>Chemistry Letters</i> , 2016 , 45, 286-288	1.7	3
68	Silicon nanodisk array with a fin field-effect transistor for time-domain weighted sum calculation toward massively parallel spiking neural networks. <i>Applied Physics Express</i> , 2016 , 9, 034201	2.4	12
67	Spike-based time-domain weighted-sum calculation using nanodevices for low power operation 2016 ,		6
66	Correlation of Critical Parameters on Carbon Nanotubes Crystallinity in Chemical Vapor Deposition by Using Renewable Bioresource. <i>Journal of Nanoscience and Nanotechnology</i> , 2016 , 16, 8263-8268	1.3	2
65	Method for Controlling Electrical Properties of Single-Layer Graphene Nanoribbons via Adsorbed Planar Molecular Nanoparticles. <i>Scientific Reports</i> , 2015 , 5, 12341	4.9	19
64	Effect of Protonation on the Single-molecule-magnet Behavior of a Mixed (Phthalocyaninato)(porphyrinato)terbium Double-decker Complex. <i>Chemistry Letters</i> , 2015 , 44, 668-670	1.7	10
63	Possible High Efficiency Platform for Biosensors Based on Optimum Physical Chemistry of Carbon Nanotubes. <i>Chemical Vapor Deposition</i> , 2015 , 21, 263-266		11
62	Vectorial Crystal Growth of Oriented Vertically Aligned Carbon Nanotubes Using Statistical Analysis. <i>Crystal Growth and Design</i> , 2015 , 15, 3457-3463	3.5	23

61	Thin films of spin-crossover coordination polymers with large thermal hysteresis loops prepared by nanoparticle spin coating. <i>Chemical Communications</i> , 2014 , 50, 10074-7	5.8	21
60	Switching of Single-Molecule Magnetic Properties of Tb(III)Porphyrin Double-Decker Complexes and Observation of Their Supramolecular Structures on a Carbon Surface. <i>Chemistry - A European Journal</i> , 2014 , 20, 11237-11237	4.8	2
59	Switching of single-molecule magnetic properties of Tb(III) -porphyrin double-decker complexes and observation of their supramolecular structures on a carbon surface. <i>Chemistry - A European Journal</i> , 2014 , 20, 11362-9	4.8	21
58	Sequential Phase Transition during Fabricating Ag ₂ S Film on Ag Electrode by Wet Chemical Process. <i>E-Journal of Surface Science and Nanotechnology</i> , 2014 , 12, 185-188	0.7	9
57	Surface Self-Assembly of Trans-Substituted Porphyrin Double-Decker Complexes Exhibiting Slow Magnetic Relaxation. <i>E-Journal of Surface Science and Nanotechnology</i> , 2014 , 12, 124-128	0.7	4
56	Temperature-Dependent Current-Voltage and Photoresponsive Properties for Semiconducting Nanodevices Fabricated from an Oligothiazole Dithiol and Gold Nanoparticles. <i>Journal of Physical Chemistry C</i> , 2013 , 117, 25325-25333	3.8	9
55	Advanced photoassisted atomic switches produced using ITO nanowire electrodes and molten photoconductive organic semiconductors. <i>Advanced Materials</i> , 2013 , 25, 5893-7	24	9
54	Rectification direction inversion in a phosphododecamolybdic acid/single-walled carbon nanotube junction. <i>Journal of Materials Chemistry C</i> , 2013 , 1, 1137-1143	7.1	14
53	Influence of Atmosphere on Photo-Assisted Atomic Switch Operations. <i>Key Engineering Materials</i> , 2013 , 596, 116-120	0.4	1
52	Volatile and nonvolatile selective switching of a photo-assisted initialized atomic switch. <i>Nanotechnology</i> , 2013 , 24, 384006	3.4	20
51	Novel charge transport in DNA-templated nanowires. <i>Journal of Materials Chemistry</i> , 2012 , 22, 13691		27
50	Temperature-dependent I-V characteristics for the nanocomposite semiconducting films composed of a thiol end-capped dinuclear macrocyclic complex and Au-NPs bridging 1 nm gap gold electrodes. <i>Dalton Transactions</i> , 2012 , 41, 14309-15	4.3	2
49	Influence of nanoparticle size to the electrical properties of naphthalenediimide on single-walled carbon nanotube wiring. <i>Nanotechnology</i> , 2012 , 23, 215701	3.4	4
48	Photocurrent and electronic activities of oriented-His-tagged photosynthetic light-harvesting/reaction center core complexes assembled onto a gold electrode. <i>Biomacromolecules</i> , 2012 , 13, 432-8	6.9	63
47	Proton-induced switching of the single molecule magnetic properties of a porphyrin based Tb(III) double-decker complex. <i>Chemical Communications</i> , 2012 , 48, 7796-8	5.8	56
46	Entropy-controlled 2D supramolecular structures of N,N'-bis(n-alkyl)naphthalenediimides on a HOPG surface. <i>ACS Nano</i> , 2012 , 6, 3876-87	16.7	52
45	Fabrication of Nanogap Electrodes by the Molecular Lithography Technique. <i>Japanese Journal of Applied Physics</i> , 2011 , 50, 035204	1.4	4
44	Volatile/Nonvolatile Dual-Functional Atom Transistor. <i>Applied Physics Express</i> , 2011 , 4, 015204	2.4	39

43	Fabrication of Nanogap Electrodes by the Molecular Lithography Technique. <i>Japanese Journal of Applied Physics</i> , 2011 , 50, 035204	1.4	2
42	Toward sub-20nm hybrid nanofabrication by combining the molecular ruler method and electron beam lithography. <i>Nanotechnology</i> , 2010 , 21, 495304	3-4	5
41	Properties of thiol end-capped and iodine-doped sexithiophene disulfide semiconducting polymers bridging nanogap gold electrodes. <i>Advanced Materials</i> , 2010 , 22, 2753-8	24	24
40	Photoassisted formation of an atomic switch. <i>Small</i> , 2010 , 6, 1745-8	11	30
39	Spectral, Structural, and Computational Studies of a New Family of Ruthenium(II) Complexes Containing Substituted 1,10-Phenanthroline Ligands and in situ Electropolymerization of a Phenanthrolineruthenium(II) Complex Bridging Nanogap Gold Electrodes. <i>European Journal of Inorganic Chemistry</i> , 2009 , 2009, 1321-1330	2-3	25
38	A photo-responsive molecular wire composed of a porphyrin polymer and a fullerene derivative. <i>Journal of Materials Chemistry</i> , 2009 , 19, 8307		19
37	Preparation of organic nanoscrews from simple porphyrin derivatives. <i>Chemical Communications</i> , 2009 , 7411-3	5.8	20
36	Preparation of Long Conjugated Porphyrin Polymers with Gold Nanoparticles at Both Ends as Electronic and/or Photonic Molecular Wires. <i>Chemistry Letters</i> , 2009 , 38, 542-543	1.7	4
35	Vertical alignment of single-walled carbon nanotube films formed by electrophoretic deposition. <i>Langmuir</i> , 2008 , 24, 12936-42	4	27
34	Syntheses, crystal structures, and spectral properties of a series of 3,8-Bisphenyl-1,10-phenanthroline derivatives: precursors of 3,8-Bis(4-mercaptophenyl)-1,10-phenanthroline and Its ruthenium(II) complex for preparing	5.1	36
33	Effects of Metal Ion Complexation for the Self-Assembled Nanocomposite Films Composed of Gold Nanoparticles and 3,8-Bis(terthiophenyl)phenanthroline-Based Dithiols Bridging 1 nm Gap Gold Electrodes: Morphology, Temperature Dependent Electronic Conduction, and Photoresponse. <i>Journal of Physical Chemistry C</i> , 2008 , 112, 11513-11526	3.8	37
32	A new utilization of organic molecules for nanofabrication using the molecular ruler method. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2008 , 313-314, 369-372	5.1	4
31	Scanning tunneling microscopy investigation of vanadyl and cobalt(II) octaethylporphyrin self-assembled monolayer arrays on graphite. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2008 , 313-314, 230-233	5.1	12
30	???. <i>Journal of the Vacuum Society of Japan</i> , 2008 , 51, 428-432		
29	Synthesis of dendron-protected porphyrin wires and preparation of a one-dimensional assembly of gold nanoparticles chemically linked to the pi-conjugated wires. <i>Langmuir</i> , 2007 , 23, 6365-71	4	37
28	Size-dependent single electron tunneling effect in Au nanoparticles. <i>Surface Science</i> , 2007 , 601, 3907-3918		23
27	Refinement of conditions of point-contact current imaging atomic force microscopy for molecular-scale conduction measurements. <i>Nanotechnology</i> , 2007 , 18, 095501	3-4	14
26	Photo-response behavior of Au nano-particle/porphyrin polymer composite device with nano-gapped electrodes. <i>Journal of Materials Science: Materials in Electronics</i> , 2007 , 18, 939-942	2.1	6

25	I-V characteristics of single electron tunneling from symmetric and asymmetric double-barrier tunneling junctions. <i>Applied Physics Letters</i> , 2007 , 90, 223112	3.4	30
24	Visible fluorescence induced by the metal semiconductor transition in composites of carbon nanotubes with noble metal nanoparticles. <i>Physical Review Letters</i> , 2007 , 99, 167404	7.4	27
23	Synthesis and self-assembly of novel porphyrin molecular wires. <i>Thin Solid Films</i> , 2006 , 499, 23-28	2.2	25
22	Porphyrin Molecular Nanodevices Wired Using Single-Walled Carbon Nanotubes. <i>Advanced Materials</i> , 2006 , 18, 1411-1415	24	67
21	Hybrid Approaches to Nanolithography: Photolithographic Structures with Precise, Controllable Nanometer-Scale Spacings Created by Molecular Rulers. <i>Advanced Materials</i> , 2006 , 18, 1020-1022	24	41
20	A method for the fabrication of sculptured thin films of periodic arrays of standing nanorods. <i>Journal of Nanoscience and Nanotechnology</i> , 2006 , 6, 3799-802	1.3	1
19	Simple Preparation Method for Supramolecular Porphyrin Arrays on Mica Using Air/Water Interface. <i>Japanese Journal of Applied Physics</i> , 2006 , 45, 2324-2327	1.4	4
18	Morphology and Electric Properties of Nonathiophene/Au Nano-Composite Thin Films Formed Between 1 μ m Gapped Electrodes. <i>Molecular Crystals and Liquid Crystals</i> , 2006 , 455, 305-309	0.5	6
17	Fabrication of nanoscale gaps using a combination of self-assembled molecular and electron beam lithographic techniques. <i>Applied Physics Letters</i> , 2006 , 88, 223111	3.4	56
16	FABRICATION OF PERIODIC STANDING ROD ARRAYS BY THE SHADOW CONE METHOD. <i>International Journal of Nanoscience</i> , 2006 , 05, 815-819	0.6	2
15	Electronic properties of a single-walled carbon nanotube/150mer-porphyrin system measured by point-contact current imaging atomic force microscopy. <i>Journal of Nanoscience and Nanotechnology</i> , 2006 , 6, 1644-8	1.3	13
14	Preparation of very reactive thiol-protected gold nanoparticles: revisiting the Brust-Schiffrin method. <i>Journal of Nanoscience and Nanotechnology</i> , 2006 , 6, 708-12	1.3	13
13	Synthesis of end-functionalized π -conjugated porphyrin oligomers. <i>Tetrahedron</i> , 2006 , 62, 4749-4755	2.4	8
12	Molecular junctions composed of oligothiophene dithiol-bridged gold nanoparticles exhibiting photoresponsive properties. <i>Chemistry - A European Journal</i> , 2005 , 12, 607-19	4.8	51
11	Position-Selected Molecular Ruler. <i>Japanese Journal of Applied Physics</i> , 2004 , 43, L950-L953	1.4	25
10	Multi-Curve Fitting Analysis of Temperature-Dependent I-V Curves of Poly-Hexathiénylphenanthroline-Bridged Nanogap Electrodes. <i>Japanese Journal of Applied Physics</i> , 2004 , 43, L634-L636	1.4	17
9	Super-Precise Nanolithography Using Multilayer of Self-Assembled Monolayers. <i>Hyomen Kagaku</i> , 2004 , 25, 650-655		
8	Advances in nanolithography using molecular rulers. <i>Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena</i> , 2003 , 21, 3116		30

7	Exploiting intermolecular interactions and self-assembly for ultrahigh resolution nanolithography. <i>Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena</i> , 2002 , 20, 2739		34
6	Electronic band structure and magnetism of Fe ₁₆ N ₂ calculated by the FLAPW method. <i>Physical Review B</i> , 2000 , 62, 15042-15046	3.3	19
5	Electron Diffraction and Microscopy Study and Band Structure Calculation of Ferromagnetic Iron-Nitride .ALPHA."-Fe ₁₆ N ₂ .. <i>Journal of the Magnetism Society of Japan</i> , 1999 , 23, 858-862		2
4	Theoretical study of electronic band structures and magnetic property of Fe ₁₆ N ₂ based on FLAPW calculations. <i>Journal of Magnetism and Magnetic Materials</i> , 1998 , 177-181, 1468-1469	2.8	3
3	Electron crystallography study of tempered iron-nitrogen martensite and structure refinement of precipitated β -Fe ₁₆ N ₂ . <i>Acta Materialia</i> , 1997 , 45, 1401-1410	8.4	26
2	Emergence of In-Materio Intelligence from an Incidental Structure of a Single-Walled Carbon NanotubeBorphyrin Polyoxometalate Random Network. <i>Advanced Intelligent Systems</i> ,2100145	6	0
1	Ag ₂ Se Nanowire Network as an Effective In-Materio Reservoir Computing Device		3