Tomohiro Nozaki

List of Publications by Year
in descending order

108	3,758	117625	133252
papers	citations	34 h-index	59 g-index

109	109	109	2531
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Functional nitrogen science based on plasma processing: quantum devices, photocatalysts and activation of plant defense and immune systems. Japanese Journal of Applied Physics, 2022, 61, SA0805.	1.5	13
2	Comprehensive process and environmental impact analysis of integrated DBD plasma steam methane reforming. Fuel, 2021, 304, 121328.	6.4	20
3	CH4 dry reforming in fluidized-bed plasma reactor enabling enhanced plasma-catalyst coupling. Journal of CO2 Utilization, 2021, 54, 101771.	6.8	17
4	Impact of non-condensable gas on oxygen-hydrogen combustion power generation system. The Proceedings of the International Conference on Power Engineering (ICOPE), 2021, 2021.15, 2021-0231.	0.0	0
5	Plasma-chemical promotion of catalysis for CH₄dry reforming: unveiling plasma-enabled reaction mechanisms. Physical Chemistry Chemical Physics, 2020, 22, 19349-19358.	2.8	33
6	Plasma-enabled mode-selective activation of CH4 for dry reforming: First touch on the kinetic analysis. Chemical Engineering Journal, 2020, 399, 125751.	12.7	52
7	Silicon nanocrystal hybrid photovoltaic devices for indoor light energy harvesting. RSC Advances, 2020, 10, 12611-12618.	3.6	11
8	Interfacial region effect on thermal conductivity of silicon nanocrystal and polystyrene nanocomposites. Plasma Processes and Polymers, 2020, 17, 1900212.	3.0	2
9	Highly efficient decomposition of toluene using a high-temperature plasma-catalysis reactor. Chemosphere, 2020, 247, 125863.	8.2	22
10	Mechanism on the plasma-catalytic oxidation of graphitic carbon over Au/Î³-Al2O3 by in situ plasma DRIFTS-mass spectrometer. Journal of Hazardous Materials, 2020, 396, 122730.	12.4	14
11	The 2020 plasma catalysis roadmap. Journal Physics D: Applied Physics, 2020, 53, 443001.	2.8	362
12	Methane Reforming Utilizing Vibrational Excitation. Vacuum and Surface Science, 2020, 63, 641-648.	0.1	0
13	Nonthermal Plasma Conversion of Natural Gas to Oxygenates. , 2020, , 53-70.		1
14	Progress and perspectives in dry processes for emerging multidisciplinary applications: how can we improve our use of dry processes?. Japanese Journal of Applied Physics, 2019, 58, SE0803.	1.5	4
15	Factors determining synergism in plasma catalysis of biogas at reduced pressure. Journal Physics D: Applied Physics, 2019, 52, 414002.	2.8	16
16	Progress and perspectives in dry processes for leading-edge manufacturing of devices: toward intelligent processes and virtual product development. Japanese Journal of Applied Physics, 2019, 58, SE0804.	1.5	7
17	Progress and perspectives in dry processes for nanoscale feature fabrication: fine pattern transfer and high-aspect-ratio feature formation. Japanese Journal of Applied Physics, 2019, 58, SE0802.	1.5	24
18	Si/SiO2 Core/Shell Luminescent Silicon Nanocrystals and Porous Silicon Powders With High Quantum Yield, Long Lifetime, and Good Stability. Frontiers in Physics, 2019, 7, .	2.1	22

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19	Mechanism of CO2-formation promotion by Au in plasma-catalytic oxidation of CH4 over Au/Î³-Al2O3 at room temperature. Journal of Hazardous Materials, 2019, 373, 698-704.	12.4	7
20	Synthesis of Nanostructured Silicon Nanoparticles for Anodes of Li-Ion Battery. , 2019, , .		2
21	Promotion of graphitic carbon oxidation via stimulating CO2 desorption by calcium carbonate. Journal of Hazardous Materials, 2019, 363, 10-15.	12.4	5
22	Basic Characteristics of Hydrogen Combustion Turbine Power Generation System. The Proceedings of the National Symposium on Power and Energy Systems, 2019, 2019.24, D125.	0.0	0
23	Plasma-Catalytic Conversion of Methane. Springer Series on Atomic, Optical, and Plasma Physics, 2019, , 231-269.	0.2	2
24	Interfacial reactions between DBD and porous catalyst in dry methane reforming. Journal Physics D: Applied Physics, 2018, 51, 114006.	2.8	36
25	Silicon Nanocrystal-Based Organic/Inorganic Hybrid Solar Cells. , 2018, , 177-203.		1
26	A Novel Four-Way Plasma-Catalytic Approach for The After-Treatment of Diesel Engine Exhausts. Industrial & Engineering Chemistry Research, 2018, 57, 1159-1168.	3.7	16
27	Plasma-catalyst hybrid reactor with CeO 2 /Î³-Al 2 O 3 for benzene decomposition with synergetic effect and nano particle by-product reduction. Journal of Hazardous Materials, 2018, 347, 150-159.	12.4	73
28	Boron nanocrystals as high-energy-density fuels. Journal Physics D: Applied Physics, 2018, 51, 025305.	2.8	5
29	Oxidation behavior of Ni/Al₂O₃ catalyst in nonthermal plasma-enabled catalysis. Journal Physics D: Applied Physics, 2018, 51, 445205.	2.8	19
30	Phonon transport properties in silicon nanoparticles and polymer nanocomposite thin films. AIP Conference Proceedings, 2018, , .	0.4	0
31	Nonthermal plasma synthesis of silicon nanoparticles and their thermal transport properties. Journal Physics D: Applied Physics, 2018, 51, 505301.	2.8	1
32	Comparative study of thermal conductivity in crystalline and amorphous nanocomposite. Applied Physics Letters, 2017, 110, .	3.3	10
33	CO(B 1Î£+â†'A 1Î) Angstrom System for Gas Temperature Measurements in CO2 Containing Plasmas. Plasma Chemistry and Plasma Processing, 2017, 37, 29-41.	2.4	36
34	Parametric analysis of plasmaâ€assisted pulsed dry methane reforming over Ni/Al₂O₃ catalyst. Plasma Processes and Polymers, 2017, 14, 1600096.	3.0	26
35	Silicon nanocrystals doped with boron and phosphorous. Series in Materials Science and Engineering, 2017, , 341-366.	0.1	0
36	Analysis of temporal evolution of quantum dot surface chemistry by surface-enhanced Raman scattering. Scientific Reports, 2016, 6, 29508.	3.3	11

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37	Silicon Nanocrystals: Sizeâ€Ðependent Structures and Optical Absorption of Boronâ€Hyperdoped Silicon Nanocrystals (Advanced Optical Materials 5/2016). Advanced Optical Materials, 2016, 4, 646-646.	7.3	2
38	Thermal conductivity of silicon nanocrystals and polystyrene nanocomposite thin films. Journal Physics D: Applied Physics, 2016, 49, 365303.	2.8	14
39	Sizeâ€Ðependent Structures and Optical Absorption of Boronâ€Hyperdoped Silicon Nanocrystals. Advanced Optical Materials, 2016, 4, 700-707.	7.3	63
40	Ligand-Free, Colloidal, and Plasmonic Silicon Nanocrystals Heavily Doped with Boron. ACS Photonics, 2016, 3, 415-422.	6.6	72
41	Double-parallel-junction hybrid solar cells based on silicon nanocrystals. Organic Electronics, 2016, 30, 99-104.	2.6	9
42	Optical, electrical, and photovoltaic properties of silicon nanoparticles with different crystallinities. Applied Physics Letters, 2015, 107, .	3.3	10
43	Boron- and Phosphorus-Hyperdoped Silicon Nanocrystals. Particle and Particle Systems Characterization, 2015, 32, 213-221.	2.3	68
44	Silicon nanocrystals synthesized using very high frequency non-thermal plasma and their application in photovoltaics. Journal Physics D: Applied Physics, 2015, 48, 314011.	2.8	3
45	One step methane conversion to syngas by dielectric barrier discharge. Japanese Journal of Applied Physics, 2015, 54, 01AG01.	1.5	9
46	Comparative Study on the Localized Surface Plasmon Resonance of Boron- and Phosphorus-Doped Silicon Nanocrystals. ACS Nano, 2015, 9, 378-386.	14.6	133
47	Pulsed dry methane reforming in plasma-enhanced catalytic reaction. Catalysis Today, 2015, 256, 67-75.	4.4	87
48	Crystallineâ€“Amorphous Silicon Nanocomposites with Reduced Thermal Conductivity for Bulk Thermoelectrics. ACS Applied Materials & Interfaces, 2015, 7, 13484-13489.	8.0	62
49	Freestanding doped silicon nanocrystals synthesized by plasma. Journal Physics D: Applied Physics, 2015, 48, 314006.	2.8	30
50	Oxygen passivation of silicon nanocrystals: Influences on trap states, electron mobility, and hybrid solar cell performance. Nano Energy, 2014, 10, 322-328.	16.0	42
51	Gas breakdown mechanism in pulse-modulated asymmetric ratio frequency dielectric barrier discharges. Physics of Plasmas, 2014, 21, 083503.	1.9	1
52	Doped silicon nanocrystals from organic dopant precursor by a SiCl4-based high frequency nonthermal plasma. Applied Physics Letters, 2014, 105, .	3.3	22
53	A parametric study of non-thermal plasma synthesis of silicon nanoparticles from a chlorinated precursor. Journal Physics D: Applied Physics, 2014, 47, 485202.	2.8	26
54	Controlled Doping of Silicon Nanocrystals Investigated by Solution-Processed Field Effect Transistors. ACS Nano, 2014, 8, 5650-5656.	14.6	78

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55	Silicon nanocrystal conjugated polymer hybrid solar cells with improved performance. Nano Energy, 2014, 9, 25-31.	16.0	50
56	Numerical Investigation on Atmospheric-Pressure Dielectric Barrier Discharges Driven by Combined rf and Short-Pulse Sources in Co-Axial Electrodes. , 2014, , .		1
57	Non-thermal plasma catalysis of methane: Principles, energy efficiency, and applications. Catalysis Today, 2013, 211, 29-38.	4.4	227
58	Optical Extinction Spectra of Silicon Nanocrystals: Size Dependence upon the Lowest Direct Transition. Langmuir, 2013, 29, 1802-1807.	3.5	32
59	Hybrid Silicon Nanocrystal/Poly(3-hexylthiophene-2,5-diyl) Solar Cells from a Chlorinated Silicon Precursor. Japanese Journal of Applied Physics, 2013, 52, 11NM04.	1.5	11
60	Plasma Synthesis of Silicon Nanoparticles: Optimization of Yield, Size Distribution, and Crystallinity. 880-02 Nihon Kikai Gakkai RonbunshÅ« Transactions of the Japan Society of Mechanical Engineers Series B B-hen, 2013, 79, 1616-1623.	0.2	2
61	Plasma enhanced C1-chemistry: towards greener methane conversion. Green Processing and Synthesis, 2012, 1, .	3.4	6
62	Plasmaâ€Induced Damage and Surface Functionalization of Doubleâ€Walled Carbon Nanotubes Using Atmospheric Pressure RF Discharge. Plasma Processes and Polymers, 2012, 9, 1154-1159.	3.0	5
63	Selective conversion of methane to synthetic fuels using dielectric barrier discharge contacting liquid film. Journal Physics D: Applied Physics, 2011, 44, 274010.	2.8	25
64	Atmospheric-pressure plasma synthesis of carbon nanotubes. Journal Physics D: Applied Physics, 2011, 44, 174007.	2.8	10
65	Plasma-assisted partial oxidation of methane at low temperatures: numerical analysis of gas-phase chemical mechanism. Journal Physics D: Applied Physics, 2011, 44, 274011.	2.8	40
66	Innovative Methane Conversion Technology Using Atmospheric Pressure Non-thermal Plasma. Journal of the Japan Petroleum Institute, 2011, 54, 146-158.	0.6	24
67	Gas-to-liquids process using multi-phase flow, non-thermal plasma microreactor. Chemical Engineering Journal, 2011, 167, 560-566.	12.7	49
68	A single step methane conversion into synthetic fuels using microplasma reactor. Chemical Engineering Journal, 2011, 166, 288-293.	12.7	77
69	Synthesis and oxidation of luminescent silicon nanocrystals from silicon tetrachloride by very high frequency nonthermal plasma. Nanotechnology, 2011, 22, 305605.	2.6	80
70	Parametric Study for Selective Growth of Single-Walled Carbon Nanotubes in Plasma Enhanced Chemical Vapor Deposition. Japanese Journal of Applied Physics, 2011, 50, 01AF03.	1.5	3
71	J054054 In-flight plasma synthesis of silicon quantum dots. The Proceedings of Mechanical Engineering Congress Japan, 2011, 2011, _J054054-1-_J054054-4.	0.0	0
72	Parametric Study for Selective Growth of Single-Walled Carbon Nanotubes in Plasma Enhanced Chemical Vapor Deposition. Japanese Journal of Applied Physics, 2011, 50, 01AF03.	1.5	0

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73	A pressure-dependent selective growth of single-walled and multi-walled carbon nanotubes using plasma enhanced chemical vapor deposition. Carbon, 2010, 48, 232-238.	10.3	20
74	Microplasma Synthesis of Silicon Nanoparticles. Journal of High Temperature Society, 2010, 36, 168-173.	0.1	0
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76	A Pressure-Dependent Transition of Carbon Nanotube Growth Mode in Plasma Enhanced Chemical Vapor Deposition(Thermal Engineering). 880-02 Nihon Kikai Gakkai RonbunshÅ« Transactions of the Japan Society of Mechanical Engineers Series B B-hen, 2009, 75, 1662-1668.	0.2	0
77	Carbon Nanotube Synthesis in Atmospheric Pressure Glow Discharge: A Review. Plasma Processes and Polymers, 2008, 5, 300-321.	3.0	59
78	Reaction Enhancement Mechanism of the Nonthermal Discharge and Catalyst Hybrid Reaction for Methane Reforming. Energy & Fuels, 2008, 22, 3600-3604.	5.1	32
79	Microplasma synthesis of tunable photoluminescent silicon nanocrystals. Nanotechnology, 2007, 18, 235603.	2.6	94
80	High-Yield Synthesis of Vertically Aligned Single-Walled Carbon Nanotubes in Ion-Damage and Radical-Damage Free Atmospheric Pressure PECVD. Materials Research Society Symposia Proceedings, 2007, 1057, 1.	0.1	0
81	Silicon Nanocrystal Synthesis in Microplasma Reactor. Journal of Thermal Science and Technology, 2007, 2, 192-199.	1.1	11
82	Kinetic Analysis of the Catalyst and Nonthermal Plasma Hybrid Reaction for Methane Steam Reforming. Energy & Fuels, 2007, 21, 2525-2530.	5.1	65
83	In Situ Fourier Transform Infrared (FTIR) Study of Nonthermal-Plasma-Assisted Methane Oxidative Conversion. Industrial & Engineering Chemistry Research, 2007, 46, 3486-3496.	3.7	28
84	Fabrication of vertically aligned single-walled carbon nanotubes in atmospheric pressure non-thermal plasma CVD. Carbon, 2007, 45, 364-374.	10.3	71
85	Methane oxidative conversion pathways in a dielectric barrier discharge reactorâ€”Investigation of gas phase mechanism. Chemical Engineering Journal, 2007, 132, 85-95.	12.7	75
86	Blue luminescent silicon nanocrystals fabricated by microplasma jet. Transactions of the Materials Research Society of Japan, 2007, 32, 459-463.	0.2	0
87	Kinetic Study of Low-temperature Methane Steam Reforming in Plasma/Catalyst Hybrid Reaction. Kagaku Kogaku Ronbunshu, 2007, 33, 439-445.	0.3	0
88	Hydrogen Enrichment of Low-Calorific Fuels Using Barrier Discharge Enhanced Ni/Î³-Al2O3Bed Reactor:â€‰ Thermal and Nonthermal Effect of Nonequilibrium Plasma. Energy & Fuels, 2006, 20, 339-345.	5.1	45
89	Materials processing at atmospheric pressure: Nonequilibrium effects on nanotechnology and mega-industries. Pure and Applied Chemistry, 2006, 78, 1157-1172.	1.9	23
90	Deposition of vertically oriented carbon nanofibers in atmospheric pressure radio frequency discharge. Journal of Applied Physics, 2006, 99, 024310.	2.5	18

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91	Materials Processing in Atmospheric Pressure Glow Plasma CVD. Journal of the Institute of Electrical Engineers of Japan, 2006, 126, 788-791.	0.0	2
92	Controlled Growth of Carbon Nanotubes Using Pulsed Glow-Barrier Discharge. , 2005, , 477-487.		2
93	Micro-plasma technology â€" direct methaneto-m ethanol in extremely confined environment-. Studies in Surface Science and Catalysis, 2004, , 505-510.	1.5	10
94	Partial oxidation of methane using a microscale non-equilibrium plasma reactor. Catalysis Today, 2004, 98, 607-616.	4.4	119
95	Diagnosis of atmospheric pressure low temperature plasma and application to high efficient methane conversion. Catalysis Today, 2004, 89, 47-55.	4.4	107
96	Dissociation of vibrationally excited methane on Ni catalyst. Catalysis Today, 2004, 89, 67-74.	4.4	71
97	Dissociation of vibrationally excited methane on Ni catalyst. Catalysis Today, 2004, 89, 57-65.	4.4	142
98	Reaction mechanism of methane activation using non-equilibrium pulsed discharge at room temperature. Fuel, 2003, 82, 2291-2297.	6.4	109
99	Application of Atmospheric-Pressure Glow Plasma: Advanced Carbon-Based Materials Processing in Atmospheric-Pressure Glow Discharge. Journal of Plasma and Fusion Research, 2003, 79, 1016-1021.	0.4	0
100	Thermal structure of atmospheric pressure non-equilibrium plasmas. Plasma Sources Science and Technology, 2002, 11, 431-438.	3.1	59
101	Ultrashort pulsed barrier discharges and applications. Pure and Applied Chemistry, 2002, 74, 447-452.	1.9	62
102	Carbon nanotubes deposition in glow barrier discharge enhanced catalytic CVD. Journal Physics D: Applied Physics, 2002, 35, 2779-2784.	2.8	67
103	Direct conversion from methane to methanol for high efficiency energy system with exergy regeneration. Energy Conversion and Management, 2002, 43, 1459-1468.	9.2	52
104	Optical diagnostics for determining gas temperature of reactive microdischarges in a methane-fed dielectric barrier discharge. Journal Physics D: Applied Physics, 2001, 34, 2504-2511.	2.8	56
105	Energy distribution and heat transfer mechanisms in atmospheric pressure non-equilibrium plasmas. Journal Physics D: Applied Physics, 2001, 34, 3383-3390.	2.8	85
106	Plasma chemical reactions at atmospheric pressure for high efficiency use of hydrocarbon fuels. Energy, 1997, 22, 369-374.	8.8	19
107	Plasma Synthesis of Silicon Nanocrystals: Application to Organic/Inorganic Photovoltaics through Solution Processing. Materials Science Forum, 0, 783-786, 2002-2004.	0.3	2
108	Plasma-Enabled Dry Methane Reforming. , 0, , .		9