Hirotaka Sato

List of Publications by Year
in descending order

64 papers	1,322 citations	361413 20 h-index	377865 34 g-index
68 all docs	68 docs citations	68 times ranked	1300 citing authors

#	Article	IF	Citations
1	Newly Developed Stepwise Electroless Deposition Enables a Remarkably Facile Synthesis of Highly Active and Stable Amorphous Pd Nanoparticle Electrocatalysts for Oxygen Reduction Reaction. Journal of the American Chemical Society, 2014, 136, 5217-5220.	13.7	132
2	Remote radio control of insect flight. Frontiers in Integrative Neuroscience, 2009, 3, 24.	2.1	109
3	Theoretical Modelling and Facile Synthesis of a Highly Active Boronâ€Doped Palladium Catalyst for the Oxygen Reduction Reaction. Angewandte Chemie - International Edition, 2016, 55, 6842-6847.	13.8	92
4	Recent Developments in the Remote Radio Control of Insect Flight. Frontiers in Neuroscience, 2010, 4, 199.	2.8	72
5	A cyborg beetle: Insect flight control through an implantable, tetherless microsystem. Proceedings of the IEEE International Conference on Micro Electro Mechanical Systems (MEMS), 2008, , .	0.0	61
6	Deciphering the Role of a Coleopteran Steering Muscle via Free Flight Stimulation. Current Biology, 2015, 25, 798-803.	3.9	50
7	High efficiency electrochemical immuno sensors using 3D comb electrodes. Biosensors and Bioelectronics, 2005, 20, 2306-2309.	10.1	47
8	A highly active Pdâ€“P nanoparticle electrocatalyst for enhanced formic acid oxidation synthesized via stepwise electroless deposition. Chemical Communications, 2016, 52, 3556-3559.	4.1	43
9	Insectâ€“computer hybrid legged robot with user-adjustable speed, step length and walking gait. Journal of the Royal Society Interface, 2016, 13, 20160060.	3.4	41
10	A Biological Micro Actuator: Graded and Closed-Loop Control of Insect Leg Motion by Electrical Stimulation of Muscles. PLoS ONE, 2014, 9, e105389.	2.5	41
11	A review on amorphous noble-metal-based electrocatalysts for fuel cells: Synthesis, characterization, performance, and future perspective. International Journal of Hydrogen Energy, 2021, 46, 14190-14211.	7.1	37
12	Facilely Fabricated Luminescent Nanoparticle Thermosensor for Real-Time Microthermography in Living Animals. ACS Sensors, 2016, 1, 1222-1227.	7.8	35
13	Feedback Control-Based Navigation of a Flying Insect-Machine Hybrid Robot. Soft Robotics, 2018, 5, 365-374.	8.0	35
14	An Ultralightweight and Living Legged Robot. Soft Robotics, 2018, 5, 17-23.	8.0	34
15	Cyborg Beetles. Scientific American, 2010, 303, 94-99.	1.0	29
16	Glue-Free Stacked Luminescent Nanosheets Enable High-Resolution Ratiometric Temperature Mapping in Living Small Animals. ACS Applied Materials & Interfaces, 2016, 8, 33377-33385.	8.0	29
17	Micro-thermography in millimeter-scale animals by using orally-dosed fluorescent nanoparticle thermosensors. Analyst, The, 2015, 140, 7534-7539.	3.5	25
18	Sideways Walking Control of a Cyborg Beetle. IEEE Transactions on Medical Robotics and Bionics, 2020, 2, 331-337.	3.2	25

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19	Electrical Stimulation of Coleopteran Muscle for Initiating Flight. PLoS ONE, 2016, 11, e0151808.	2.5	23
20	A Cyborg Insect Reveals a Function of a Muscle in Free Flight. Cyborg and Bionic Systems, 2022, 2022, .	7.9	23
21	Feedback Altitude Control of a Flying Insectâ€“Computer Hybrid Robot. IEEE Transactions on Robotics, 2021, 37, 2041-2051.	10.3	21
22	Electrochemical Formation Process of Si Macropore and Metal Filling for High Aspect Ratio Metal Microstructure Using Single Electrolyte System. Electrochemistry, 2005, 73, 275-278.	1.4	20
23	Neurotransmitter-Loaded Nanocapsule Triggers On-Demand Muscle Relaxation in Living Organism. ACS Applied Materials & Interfaces, 2018, 10, 37812-37819.	8.0	18
24	Three-dimensional microfabrication process using Bi electrodeposition for a highly sensitive X-ray imaging sensor. Journal of Electroanalytical Chemistry, 2005, 584, 28-33.	3.8	17
25	Insect-Computer Hybrid Robot. Molecular Frontiers Journal, 2018, 02, 30-42.	1.1	17
26	Role of outstretched fore legs of flying beetles revealed and demonstrated by remote leg stimulation in free flight. Journal of Experimental Biology, 2017, 220, 3499-3507.	1.7	15
27	Insectâ€“Computer Hybrid Robot Achieves a Walking Gait Rarely Seen in Nature by Replacing the Anisotropic Natural Leg Spines With Isotropic Artificial Leg Spines. IEEE Transactions on Robotics, 2019, 35, 1034-1038.	10.3	15
28	Thermosensitive nanoplatforms for photothermal release of cargo from liposomes under intracellular temperature monitoring. RSC Advances, 2015, 5, 93530-93538.	3.6	14
29	Area-Selective Formation of Macropore Array by Anisotropic Electrochemical Etching on an n-Si(100) Surface in Aqueous HF Solution. Journal of Physical Chemistry B, 2005, 109, 5724-5727.	2.6	13
30	Sn electrodeposition process for fabricating microabsorber arrays for an X-ray microcalorimeter. Journal of Electroanalytical Chemistry, 2003, 559, 143-148.	3.8	12
31	A facilely synthesized highly active Pd nanoparticle electrocatalyst for electroless deposition process. RSC Advances, 2015, 5, 88805-88808.	3.6	11
32	A Beetle Flight Muscle Displays Leg Muscle Microstructure. Biophysical Journal, 2016, 111, 1295-1303.	0.5	11
33	Theoretical Modelling and Facile Synthesis of a Highly Active Boronâ€Doped Palladium Catalyst for the Oxygen Reduction Reaction. Angewandte Chemie, 2016, 128, 6956-6961.	2.0	11
34	Fuzzy-controlled living insect legged actuator. Sensors and Actuators A: Physical, 2016, 242, 182-194.	4.1	10
35	Nanocapsules for Programmed Neurotransmitter Release: Toward Artificial Extracellular Synaptic Vesicles. Small, 2019, 15, e1900132.	10.0	10
36	Smooth and slipless walking mechanism inspired by the openâ€“close cycle of a beetle claw. Bioinspiration and Biomimetics, 2021, 16, 016011.	2.9	10

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37	Fabrication of high-aspect-ratio arrayed structures using Si electrochemical etching. Science and Technology of Advanced Materials, 2006, 7, 468-474.	6.1	9
38	Insect-machine hybrid robot: Insect walking control by sequential electrical stimulation of leg muscles. , 2015, , .		9
39	Remote radio controlled insect-computer hybrid legged robot. , 2017, , .		9
40	One-Minute Synthesis via Electroless Reduction of Amorphous Phosphorus-Doped Graphene for Oxygen Reduction Reaction. ACS Applied Energy Materials, 2021, 4, 5388-5391.	5.1	9
41	Controlled banked turns in coleopteran flight measured by a miniature wireless inertial measurement unit. Bioinspiration and Biomimetics, 2016, 11, 056018.	2.9	8
42	Nanocapsule pH Regulator: Sustained Continuous Alkali Release from Thermosensitive Liposomes Reduces Acid Erosion. ACS Applied Materials & Interfaces, 2020, 12, 21463-21469.	8.0	8
43	Remote radio control of insect flight reveals why beetles lift their legs in flight while other insects tightly fold. Bioinspiration and Biomimetics, 2021, 16, 036001.	2.9	8
44	Enhancing Catalytic Activity of Bioanode for Glucose Biofuel Cell by Compressing Enzyme, Mediator and Carbon Support through Centrifugation. Chemistry - A European Journal, 2017, 23, 11485-11488.	3.3	7
45	Electrochemical etching process to tune the diameter of arrayed deep pores by controlling carrier collection at a semiconductorâ€“electrolyte interface. Electrochemistry Communications, 2010, 12, 765-768.	4.7	6
46	The function of pitching in Beetle's flight revealed by insect-wearable backpack. Biosensors and Bioelectronics, 2022, 198, 113818.	10.1	6
47	Insect-machine Hybrid System: Remote Radio Control of a Freely Flying Beetle (Mercynorrhina) Tj ETQq1 1 0.784314 rgBT /Over	0.3	5
48	Picoliter volume glass tube array fabricated by Si electrochemical etching process. Electrochimica Acta, 2005, 51, 844-848.	5.2	4
49	Oral Dosing of Chemical Indicators for In Vivo Monitoring of Ca2+ Dynamics in Insect Muscle. PLoS ONE, 2015, 10, e0116655.	2.5	4
50	Fabrication of magnetic nanodot arrays for patterned magnetic recording media. Journal of Nanoscience and Nanotechnology, 2007, 7, 225-31.	0.9	4
51	Theoretical Modeling, Facile Fabrication, and Experimental Study of Optimally Bound Bilirubin Oxidase on Palladium Nanoparticles for Enhanced Oxygen Reduction Reaction. ACS Catalysis, 2018, 8, 4950-4954.	11.2	3
52	Self-calibrated fluorescent thermometer nanoparticles enable in vivo micro thermography in milimeter scale living animals. , 2015, , .		2
53	Electrochemical System Encapsulated by Nanoscale Liposomes Enabling On-Demand Triggering of Electroless Deposition at Selected Areas. ACS Applied Nano Materials, 2020, 3, 5098-5106.	5.0	2
54	Alloy-free amorphous Ptâ€“Bâ€“P/C electrocatalyst for enhanced methanol electro-oxidation. International Journal of Hydrogen Energy, 2021, 46, 31305-31311.	7.1	2

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55	Development of Bi Electrodeposition Process for Fabricating Microabsorber Array for High Sensitive X-ray Imaging Sensor. Electrochemistry, 2004, 72, 424-426.	1.4	2
56	New Developments in Chemical Wet Processes. Preparation of Functionally Graded Magnetic Thin Films by Electroless Deposition Process.. Hyomen Kagaku, 2001, 22, 350-356.	0.0	1
57	Self-aligned formation of nano-holes to arrayed micro glass tubes. Electrochimica Acta, 2007, 53, 200-204.	5.2	1
58	Development of Insect Cyborgs with Artificial Wings. , 2019, , .		1
59	æµ·å–ç•™å¦Â·æ»žåœ¨è¯. Electrochemistry, 2011, 79, 586-587.	1.4	0
60	Frontispiz: Theoretical Modelling and Facile Synthesis of a Highly Active Boron-Doped Palladium Catalyst for the Oxygen Reduction Reaction. Angewandte Chemie, 2016, 128, .	2.0	0
61	Frontispiece: Theoretical Modelling and Facile Synthesis of a Highly Active Boron-Doped Palladium Catalyst for the Oxygen Reduction Reaction. Angewandte Chemie - International Edition, 2016, 55, .	13.8	0
62	Drug Delivery: Nanocapsules for Programmed Neurotransmitter Release: Toward Artificial Extracellular Synaptic Vesicles (Small 17/2019). Small, 2019, 15, 1970088.	10.0	0
63	Flying Cyborg: A New Approach for the Study of Coleoptera's Flight Pitching. , 2019, , .		0
64	Nano Capsule Based Chemical Releasing System for Insect-Computer Hybrid Robot. , 2020, , .		0