

Shigeo Sato

List of Publications by Year in descending order

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57
papers

643
citations

933447

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580821

25
g-index

59
all docs

59
docs citations

59
times ranked

820
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|--|------|-----------|
| 1 | Macroscopic Quantum Tunneling in ad-Wave High-TCBi ₂ Sr ₂ CaCu ₂ O ₈ +Î Superconductor. Physical Review Letters, 2005, 95, 107005. | 7.8 | 172 |
| 2 | Analogue spin-orbit torque device for artificial-neural-network-based associative memory operation. Applied Physics Express, 2017, 10, 013007. | 2.4 | 146 |
| 3 | Impact of modular organization on dynamical richness in cortical networks. Science Advances, 2018, 4, eaau4914. | 10.3 | 74 |
| 4 | Implementation of a new neurochip using stochastic logic. IEEE Transactions on Neural Networks, 2003, 14, 1122-1127. | 4.2 | 38 |
| 5 | Effects of interfacial chemical states on the performance of perovskite solar cells. Journal of Materials Chemistry A, 2016, 4, 4392-4397. | 10.3 | 25 |
| 6 | Integrated Circuits of Map Chaos Generators. Analog Integrated Circuits and Signal Processing, 2000, 25, 329-335. | 1.4 | 24 |
| 7 | Size-dependent regulation of synchronized activity in living neuronal networks. Physical Review E, 2016, 94, 012407. | 2.1 | 19 |
| 8 | An Approach for Quantum Computing using Adiabatic Evolution Algorithm. Japanese Journal of Applied Physics, 2003, 42, 7169-7173. | 1.5 | 16 |
| 9 | Neuromorphic quantum computation with energy dissipation. Physical Review A, 2005, 72, . | 2.5 | 15 |
| 10 | Study of macroscopic quantum tunnelling in Bi ₂ Sr ₂ CaCu ₂ O ₈ +Î intrinsic Josephson junctions. Superconductor Science and Technology, 2007, 20, S105-S109. | 3.5 | 10 |
| 11 | Quantum Neural Network Composed of Kane's Qubits. Japanese Journal of Applied Physics, 2006, 45, 8030-8034. | 1.5 | 9 |
| 12 | 4-bit SFQ Multiplier Based on Booth Encoder. IEEE Transactions on Applied Superconductivity, 2011, 21, 852-855. | 1.7 | 7 |
| 13 | Epitaxial growth of Si _{1-x} Ge _x alloys and Ge on Si(100) by electron-cyclotron-resonance Ar plasma chemical vapor deposition without substrate heating. Thin Solid Films, 2014, 557, 31-35. | 1.8 | 7 |
| 14 | Carrier properties of B atomic-layer-doped Si films grown by ECR Ar plasma-enhanced CVD without substrate heating. Science and Technology of Advanced Materials, 2017, 18, 294-306. | 6.1 | 6 |
| 15 | Evaluation of junction parameters with control of carrier concentration in Bi ₂ Sr ₂ CaCu ₂ O ₈ +Î stacked junctions. Physica C: Superconductivity and Its Applications, 2004, 412-414, 1396-1400. | 1.2 | 5 |
| 16 | Surface Reaction in Thin Film Formation of Si _{1-x} Ge _x Alloys on Si(100) by Electron-Cyclotron-Resonance Ar Plasma Chemical Vapor Deposition without Substrate Heating. ECS Transactions, 2014, 64, 99-105. | 0.5 | 5 |
| 17 | Electronic properties of Si/Si-Ge Alloy/Si(100) heterostructures formed by ECR Ar plasma CVD without substrate heating. Materials Science in Semiconductor Processing, 2017, 70, 55-62. | 4.0 | 4 |
| 18 | Analog-circuit implementation of multiplicative spike-timing-dependent plasticity with linear decay. Nonlinear Theory and Its Applications IEICE, 2021, 12, 685-694. | 0.6 | 4 |

| # | ARTICLE | IF | CITATIONS |
|----|---|-----|-----------|
| 19 | An Izhikevich Model Neuron MOS Circuit for Low Voltage Operation. Lecture Notes in Computer Science, 2019, , 718-723. | 1.3 | 4 |
| 20 | Polydimethylsiloxane microfluidic films for in vitro engineering of small-scale neuronal networks. Japanese Journal of Applied Physics, 2020, 59, 117001. | 1.5 | 4 |
| 21 | Hardware Implementation of an Inverse Function Delayed Neural Network Using Stochastic Logic. IEICE Transactions on Information and Systems, 2006, E89-D, 2572-2578. | 0.7 | 4 |
| 22 | Electrical transport characteristics of Bi ₂ Sr ₂ CaCu ₂ O ₈ + \hat{A} stacked junctions with control of the carrier density. Superconductor Science and Technology, 2003, 16, 1365-1367. | 3.5 | 3 |
| 23 | Epitaxial Growth of Heavily B-Doped Si and Ge Films on Si(100) by Low-Energy ECR Ar Plasma CVD without Substrate Heating. ECS Transactions, 2013, 58, 223-228. | 0.5 | 3 |
| 24 | Izhikevich neuron circuit using stochastic logic. Electronics Letters, 2014, 50, 1795-1797. | 1.0 | 3 |
| 25 | Modularity-dependent modulation of synchronized bursting activity in cultured neuronal network models. , 2017, , . | | 3 |
| 26 | Mean-field analysis of directed modular networks. Chaos, 2019, 29, 013142. | 2.5 | 3 |
| 27 | A Content-Addressable Memory Using \hat{A} Switched Diffusion Analog Memory with Feedback Circuit \hat{A} : Analog Integrated Circuits and Signal Processing, 2000, 25, 337-346. | 1.4 | 2 |
| 28 | An application of higher order connection to inverse function delayed network. Nonlinear Theory and Its Applications IEICE, 2011, 2, 180-197. | 0.6 | 2 |
| 29 | Dynamic characteristics of a simple bursting neuron model. Nonlinear Theory and Its Applications IEICE, 2012, 3, 436-456. | 0.6 | 2 |
| 30 | Electrical properties and B depth profiles of in-situ B doped Si films grown by ECR Ar plasma CVD without substrate heating. Materials Science in Semiconductor Processing, 2017, 70, 50-54. | 4.0 | 2 |
| 31 | Quantum Associative Memory with Quantum Neural Network via Adiabatic Hamiltonian Evolution. IEICE Transactions on Information and Systems, 2017, E100.D, 2683-2689. | 0.7 | 2 |
| 32 | Learning Rule for a Quantum Neural Network Inspired by Hebbian Learning. IEICE Transactions on Information and Systems, 2021, E104.D, 237-245. | 0.7 | 2 |
| 33 | Computational Efficiency of a Modular Reservoir Network for Image Recognition. Frontiers in Computational Neuroscience, 2021, 15, 594337. | 2.1 | 2 |
| 34 | Macroscopic Quantum Tunneling and Resonant Activation of Current Biased Intrinsic Josephson Junctions in Bi-2212. IEICE Transactions on Electronics, 2007, E90-C, 599-604. | 0.6 | 2 |
| 35 | New Nonvolatile Analog Memories for Analog Data Processing. Japanese Journal of Applied Physics, 2000, 39, 2291-2296. | 1.5 | 1 |
| 36 | Analysis of burst dynamics bound by potential with active areas. Nonlinear Theory and Its Applications IEICE, 2011, 2, 417-431. | 0.6 | 1 |

| # | ARTICLE | IF | CITATIONS |
|----|---|-----|-----------|
| 37 | Majority neuron circuit having large fan-in with non-volatile synaptic weight. , 2014, , . | | 1 |
| 38 | Neuro-inspired quantum associative memory using adiabatic hamiltonian evolution. , 2017, , . | | 1 |
| 39 | Quantitative Analysis of Dynamical Complexity in Cultured Neuronal Network Models for Reservoir Computing Applications. , 2019, , . | | 1 |
| 40 | Electron-cyclotron resonance Ar plasma-induced electrical activation of B atoms without substrate heating in B doped Si epitaxial films on Si(100). Materials Science in Semiconductor Processing, 2020, 107, 104823. | 4.0 | 1 |
| 41 | Energy Dissipation Effect on a Quantum Neural Network. Lecture Notes in Computer Science, 2007, , 730-737. | 1.3 | 1 |
| 42 | LSI Implementation of Neural Network Model for Detecting Local Image Motion in Motion Stereo Vision. The Brain & Neural Networks, 2015, 22, 152-161. | 0.1 | 1 |
| 43 | Modular networks of spiking neurons for applications in time-series information processing. Nonlinear Theory and Its Applications IEICE, 2020, 11, 590-600. | 0.6 | 1 |
| 44 | Implementation of a class of asymmetrical neural networks with application to an aac-d converter. Electronics and Communications in Japan, 1992, 75, 92-102. | 0.2 | 0 |
| 45 | Study on the performance of neuromorphic adiabatic quantum computation algorithms. , 2008, , . | | 0 |
| 46 | Performance evaluation of adiabatic quantum computation using neuron-like interconnections. Nonlinear Theory and Its Applications IEICE, 2011, 2, 198-204. | 0.6 | 0 |
| 47 | Dynamic Characteristics of Neuron Models and Active Areas in Potential Functions. Procedia IUTAM, 2012, 5, 49-53. | 1.2 | 0 |
| 48 | Formation and Characterization of Strained Si1-XGex Films Epitaxially Grown on Si(100) by Low-Energy ECR Ar Plasma CVD without Substrate Heating. ECS Transactions, 2013, 58, 207-211. | 0.5 | 0 |
| 49 | Silicon-Carbon alloy film formation on Si(100) using SiH 4 and CH 4 reaction under low-energy ECR Ar plasma irradiation. Materials Science in Semiconductor Processing, 2017, 70, 188-192. | 4.0 | 0 |
| 50 | Design of Single Electron Circuitry for a Stochastic Logic Neural Network. Lecture Notes in Computer Science, 2004, , 1010-1016. | 1.3 | 0 |
| 51 | Neuromorphic Adiabatic Quantum Computation. , 2009, , 352-375. | | 0 |
| 52 | High Throughput Parallel Arithmetic Circuits for Fast Fourier Transform. IEICE Transactions on Electronics, 2011, E94-C, 280-287. | 0.6 | 0 |
| 53 | Method of Solving Combinatorial Optimization Problems with Stochastic Effects. Lecture Notes in Computer Science, 2011, , 389-394. | 1.3 | 0 |
| 54 | CMOS Majority Circuit with Large Fan-In. IEICE Transactions on Electronics, 2016, E99.C, 1056-1064. | 0.6 | 0 |

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|----|---|-----|-----------|
| 55 | (Invited) Low-Energy Plasma Enhanced Chemical Vapor Deposition and In-Situ Doping for Junction Formation in Group-IV Semiconductor Devices. ECS Meeting Abstracts, 2019, , . | 0.0 | 0 |
| 56 | Designing the human-centric IoT society: Cooperative industry-academic strategies for creative future connection. Nonlinear Theory and Its Applications IEICE, 2022, 13, 197-202. | 0.6 | 0 |
| 57 | An investigation of the relationship between numerical precision and performance of Q-learning for hardware implementation. Nonlinear Theory and Its Applications IEICE, 2022, 13, 427-433. | 0.6 | 0 |