MEMRISYS 2021 Poster Presentations (November 1, 2021   14:00 - 15:45;   November 2 – 4, 2021   13:30 - 15:45)

1. Applications - Logic - Memristor Theory - Memristor Models

P-1	Performance Metric Analysis of Memristive Integrating Amplifier	Jiaqi Wang	University of Southampton, Southampton, UK
P-2	First Principles Thermodynamics of Hydrogen Defects in $LiCoO_2$	Elvis F. Arguelles	The University of Tokyo, Tokyo, Japan
P-3	Cu Diffusion in Amorphous-Ta_2O_5 Containing H_2O Studied with High-dimensional Neural Network Potential	Junichi Okamoto	The University of Tokyo, Tokyo, Japan
P-4	Oxygen Mediation at Electrode/HfO_2 Interface in Memristor: An Ab Initio Study	Yun-Lai Zhu	Wuhan National Laboratory for Optoelectronics, Wuhan, China
P-5	Flexible Model of Memristor with Conductivity Modifying Features	Fedor Meshchaninov	Moscow Institute of Physics and Technology, Moscow, Russia
P-6	Ion-Modulated Molybdenum Disulfide Memristors for Energy-Efficient Cognitive Hardware: A Collective Experimental and Theoretical	Dip Das	Shiv Nadar University, Greater Noida, India
P-7	Structural Analysis for Lowering Writing Current of Phase-change Device with Nanostructure by Finite Element Method	Ryoma Shirakawa	Gunma University, Gunma, Japan
P-8	Statistical Evaluation of Tailored Memristive Characteristics in TiO_x-HfO_x Bilayer System	Seongae Park	Technische Universität Ilmenau, Ilmenau, Germany
P-9	Small-scale Demonstrator for Binary Vector-Matrix Multiplications using Emulated Complementary Resistive Switches	Tobias Ziegler	RWTH Aachen University, Aachen, Germany
P-10	Switching Dynamics of NbO_2-based Resistively Coupled Oscillators	Ziqing Luo	Tianjin University, Tianjin, China
P-11	Theoretical Analyses of Analog Resistance Change Phenomena in Pt/TaO_x/Ta_2O_5/Pt cells	Yuto Nakamura	Toyohashi University of Technology, Aichi, Japan
P-12	Exploring Arrays of High-plasticity Parylene-based Memristive Single and Crossbar Structures	Boris S. Shvetsov	National Research Center "Kurchatov Institute", Moscow, Russia
P-13	A Reconfigurable CMOS-Memristor Third-Order Filter	Jiawei Shen	Imperial College London, London, UK

2. Memristor Physics and Characterization

P-14	Resistive Switching Behavior and Charge Transport Mechanism in $La_{0.7}Ca_{0.3}MnO_3$-rGO Nanocomposite Systems	Karuna Kumari	Indian Institute of Technology Patna, Patna, India
P-15	Thermally Stimulated Current in Sputtered Ir/Ta_2O_5	Guento Misawa	National Institute of Advanced Industrial Science and Technology, Tsukuba, Japan
P-16	Interface Effects of Annealing Processes on TiO_2-based memristive devices	Spyros Stathopoulos	University of Southampton, Southampton, UK
P-17	In situ TEM of Unipolar-like CBRAM Operation	Satoshi Muto	Hokkaido University, Sapporo, Japan
P-18	The Electric Double Layer Effect and its Strong Suppression in Li^+ Solid Electrolyte-based Transistors	Makoto Takayanagi	National Institute for Materials Science, Tsukuba, Japan
P-19	Impacts of Oxygen Composition in an Oxygen-vacancy Reservoir Layer on Forming and Resistive Switching Characteristics in $Pt/TaO_x/Ta_2O_5/Pt$ Cells	Toshiki Miyatani	Kyoto University, Kyoto,Japan
P-20	Thermal Characterization of Reset Processes in Unipolar RRAMs	David Maldonado	Universidad de Granada, Granada, Spain
P-21	Resistance Change Response against voltage pulses at RESET process of $Ti/HfO_x/Au/HfO_x/Pt$ ReRAM Devices	Chuan Yang Huang	Kansai University, Osaka, Japan
P-22	Electrode Material Effects of Forming Characteristics in Double Ta_2O_5-based Resistive Switching Cells	Tomoaki Ohno	NIT Maizuru College, Kyoto, Japan
P-23	N-O co-doped Sb_2Te_3 Chalcogenide Memristive Material	Koji Niiyama	Gunma University, Gunma, Japan
P-24	Stochastic Resonance Observed in Memristors Considering Threshold Variation	Katsuya Kotake	Tokyo University of Science, Tokyo, Japan
P-25	Simultaneous Control of Conductivity and Magnetic Properties of Ni Filaments in Resistive Random Access memory by Adopting IL-FET Structure	Masaki Ise	Tokyo University of Science, Tokyo, Japan
P-26	Formation and Investigation of Memristor Based on Electrochemical Titanium Oxide Nanodots	Lev Georgievich Zhavoronkov	Southern Federal University, Rostov-on-Don, Russia
P-27	ReRAM Device Modeling using Heteroscedastic Gaussian Process	Imtiaz Hossen	George Washington University, Washington, D.C., USA
P-28	Impact of External Charge Carriers and Electrode Materials in Sputtered MoS_2 Memristive Devices	Anna Linkenheil	Technische Universität Ilmenau, Ilmenau, Germany
P-29	Noise Spectroscopy of SiO_x Based Nanometer-scale Resistive Switching Memories	Zoltan Balogh	Budapest University of Technology and Economics, Budapest, Hungary
P-30	Quantized Conductance Atomic Switch Device using Triptycene-based Azo Polymer	Samapika Mallik	Indian Institute of Technology Patna, Patna, India
P-31	In situ Manipulation of Perpendicular Magnetic Anisotropy in Half-metallic $NiCo_2O_4$ Thin Film by Proton Insertion	Tomoki Wada	National Institute for Materials Science, Tsukuba, Japan
P-32	Resistivity Switching of Band-Engineered VO_2/Nb-TiO_2 Multilayer	Hiroki Ito	Tokyo University of Science, Tokyo, Japan
P-33	Transparent ZnO Resistive Switching Memory Fabricated by Changing Sputter Condition and Neutral Oxygen Beam Treatment	Kana Minami	Oita University, Oita, Japan

3.   Neuron device   -   Synaptic device   -   Computing   -   Device Architectures

P-34	Resistive Switching Behavior of LiMn$_2$O$_4$-based Memristor for Neuromorphic Computing	Li-Heng Li	Huazhong University of Science and Technology, Wuhan, China
P-35	Effect of SiO$_2$ Sublayer on Degradation of Si$_3$N$_4$ Based Nanometer Sized Memristive Systems	Viktor S. Kochergin	National Research Lobachevsky State University of Nizhny Novgorod, Nizhny Novgorod, Russia
P-36	Noise-induced Resistance Switching of the SiO$_2$-based Memristor	Maria N. Koryazhkina	National Research Lobachevsky State University of Nizhny Novgorod, Nizhny Novgorod, Russia
P-37	Relaxation Times to the Stationary State of ZrO$_2$(Y)-based Memristor	Maria N. Koryazhkina	National Research Lobachevsky State University of Nizhny Novgorod, Nizhny Novgorod, Russia
P-38	Effect of Thin TiN Electrode for Realizing Symmetric Threshold Switching Devices Using NbO$_x$	Rintaro Hatanaka	Kansai University, Osaka, Japan
P-39	Light-Induced Programming of PEDOT: PSS/Metal-Oxide Memristors	Spyros Stathopoulos	University of Southampton, Southampton, UK
P-40	Pavlovian Conditioning Implemented in Four-terminal TiO$_{2-x}$ Memristive Devices	Akira Sakai	Osaka University, Osaka, Japan
P-41	Homo-layer Hafnia-based Memristor with Large Analog Switching Window	Na Bai	Huazhong University of Science and Technology, Wuhan, China
P-42	Tailoring Resistive Switching Characteristics of IGZO-based Memristive Devices for Artificial Deep Learning Neural Networks	Maria Elias Pereira	NOVA University Lisbon, Lisbon, Portugal
P-43	Pulse Programming Method for Phase-change Artificial Synapse	You Yin	Gunma University, Gunma, Japan
P-44	Fabrication of Fine 3D-crossbar Electrodes using Light-controlled Selective Metal-vapor Deposition of Photochromic Diarylethenes	Akari Nishimura	Osaka Kyoiku University, Osaka, Japan
P-45	Photochromic Diarylethens as Memristive Materials	Keishi Yamabayashi	Osaka Kyoiku University, Osaka, Japan
P-46	Resistive Switching in a nm-Thick Ta$_2$O$_5$ Film Formed by Ta plasma oxidation	Yasuyoshi Sato	Oita University, Oita, Japan
P-47	Unveiling the Analogies between the Atomic Switch and NMDA Receptor-based Signal Transmission of Biological Synapse	Anwesha Mahapatra	Indian Institute of Technology Patna, Patna, India
P-48	Metal Oxide Networks as Synaptic Materials	Alexandra I. BERG	University of Groningen, Groningen, The Netherlands