**List of publications**

Ilia Valov

December 2020

1. Valov, I., Yang, Y., Memristors with alloyed electrodes. **Nature Nanotechnology**, *15*, 510-511 (2020)
2. Milano, G. *et al.* Brain-Inspired Structural Plasticity through Reweighting and Rewiring in Multi-Terminal Self-Organizing Memristive Nanowire Networks. **Advanced Intelligent Systems**, *2*, 2000096 (2020)
3. Milano, G. et al. Water-Mediated Ionic Migration in Memristive Nanowires with a Tunable Resistive Switching Mechanism **ACS Appl. Mater. Interfaces,** **12**, 48773-48780 (2020)
4. Lübben, M. *et al.* Design of defect-chemical properties and device performance in memristive systems. **Science Advances**, *6*, eaaz9079 (2020).
5. Daniel Bick, Ilia Valov, Theodor Schneller, & Rainer Waser, Chemically Resistant, Oxidic Electrocatalyst For Oxygen Evolution During Alkaline Water Electrolysis. **US Patent 2020/0040473 A1** (2020).
6. Singh, A., Schneller, T., Valov, I., Singh, I., Srivastava, A. & Waser, R. Copper facilitated nickel oxy-hydroxide films as efficient synergistic oxygen evolution electrocatalyst. **J. Catal***.* 384, 189-198 (2020).
7. Ilia Valov, Tsuyoshi Hasegawa, Tohru Tsuruoka, Rainer Waser, & Masakazu Aono, Nanoscale Electrochemical Studies: How Can We Use the Atomic Switch. **In Book: Atomic Switch Atomic Switch: From Invention to Practical Use and Future Prospects,** *Springer International Publishing*, 73-93 (2020).

***2019***

1. Valov, I. Silicon memristors go electric. **Nature Electronics** *2*, 56-57 (2019)
2. Milano, G. *et al*. Ionic Modulation of Electrical Conductivity of ZnO Due to Ambient Moisture. Adv. Mater Interfaces, *6*, 1900803 (2019)
3. Valov, I. & Bartlett, P. N. Editorial Preface, **Faraday Discuss***.* *213*, 9 (2019)
4. Hiraya, W. *et al.* Resistivity control by the electrochemical removal of dopant atoms from a nanodot. **Faraday Discuss***.* *213*, 29-40 (2019).
5. Lanza, M. *et al.* Recommended Methods to Study Resistive Switching Devices. **Advanced Electronic Materials** *5*, 1800143 (2019)
6. Lübben, M. & Valov, I. Active Electrode Redox Reactions and Device Behavior in ECM Type Resistive Switching Memories. **Adv. El. Mater***.* *5*, 1800933 (2019)
7. Milano, G., Porro, S., Valov, I. & Ricciardi, C. Recent Developments and Perspectives for Memristive Devices Based on Metal Oxide Nanowires. **Advanced Electronic Materials**, *5*, 1800909 (2019)
8. Weber, M. *et al.* Electrolysis of water at atomically tailored epitaxial cobaltite surfaces. **Chem. Mater***.* *31*, 2337-2346 (2019)
9. Zaffora, A., Di Quarto, F., Habazaki, H., Valov, I. & Santamaria, M. Electrochemically prepared oxides for resistive switching memories. **Faraday Discuss***.* *213*, 165-181 (2019)

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2. Heisig, T. *et al.* Oxygen Exchange Processes between Oxide Memristive Devices and Water Molecules. **Adv. Mater***.* 30, 1800957 (2018).
3. Mehonic, A. *et al.* Silicon Oxide (SiOx): A Promising Material for Resistance Switching?. **Adv. Mater***.* 30, 1801187 (2018)
4. Valov, I. & Tsuruoka, T. Effects of moisture and redox reactions in VCM and ECM resistive switching memories. **J. Phys. D Appl. Phys***.* 51, 413001 (2018).
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