



[HARVESTORE](#) and [SOIFIT](#) present

# The Power of Interfaces 2021

Online workshop, April 21<sup>st</sup>

The JSPS core to core network SOIFIT and the EU project HARVESTORE invite you to join an online workshop on April 21<sup>st</sup>.

The two consortia are concerned with the common goal of gaining a deeper understanding of materials and their interfaces for ionic devices. Following last year's meeting at the Royal Society in London, where we managed to host almost 70 participants, the virtual meeting this year will consist of four sessions covering new materials for energy, nanoionics, interface techniques, iontronics and in-situ techniques. Each session will comprise of an invited talk of 30 mins and 4 contributed talks.

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Info and free registration: [here](#)

## Program

Click on the title to open the abstract.

08:45-08:55 (London time)	Setting up connections
08:55-09:00	Introductory remarks by Prof. J. Kilner (Imperial College)
<b>Session 1 – Novel materials</b>	
Chair: Dr. Ainara Agüadero	
09:00-09:30	Invited speaker Dr. M. Reynaud (CIC Energigune): <a href="#">“Design of new materials for Li-ion and Na-ion batteries”</a>
09:30-09:45	H. Yaguchi (Tokyo Institute of Technology): <a href="#">“New Structure Family of Oxide-ion Conductors Based on BaGdInO<sub>4</sub>”</a> Y. Yasui (Tokyo Institute of Technology): <a href="#">“High Oxide-ion Conductivity and Ion-Diffusion Pathway in Ba<sub>7</sub>Nb<sub>3.9</sub>Mo<sub>1.1</sub>O<sub>20.05</sub>”</a>
09:45-10:00	Y. Zhou (Imperial College): <a href="#">“NdBaInO<sub>4</sub> Based Triple (Electronic, Ionic and Protonic) Conductor for Solid Oxide Fuel Cell Applications”</a>
10:00-10:15	A. Mielewczyk-Gryń (Gdańsk University of Technology): <a href="#">“First insight on protonic conductivity of high entropy oxides”</a>
10:15-10:30	F. Baiutti (Catalonia Institute for Energy Research): <a href="#">“Assessing the role of local chemistry in thin film nanocomposites for electrode application”</a>
10:30-10:45	Break
<b>Session 2 – Nanoionics and grain boundaries</b>	
Chair: Dr. Francesco Chiabrera	
10:45-11:15	Invited speaker Prof. T. Ishihara (Kyushu University): <a href="#">“Strain effects on electronic band structure of SrTiO<sub>3</sub> and photocatalytic water splitting activity”</a>
11:15-11:30	M. L. Weber (Forschungszentrum Juelich): <a href="#">“Exsolution of Embedded Nanoparticles in Defect Engineered SrTi<sub>0.9</sub>Nb<sub>0.05</sub>Ni<sub>0.05</sub>O<sub>3-δ</sub> Perovskite Oxide Thin Films”</a>
11:30-11:45	J. Kilner (Imperial College): <a href="#">“Grain boundary Diffusion in Mixed Electronic Ionic Conductors (MEICS)”</a>
11:45-12:00	J. Sirvent (Catalonia Institute for Energy Research): <a href="#">“Development of nanostructured ceramic thin films for micro solid oxide cell application”</a>
12:00-12:15	A. Stangl (CNRS): <a href="#">“La<sub>2</sub>NiO<sub>4+δ</sub> thin films for highly active μSOC cathodes”</a>
12:15-13:00	Break (SOIFIT admin meeting)

<b>Session 3 – Interfaces and Iontronics</b>	
Tentative chair: Dr. Katherine Develos-Bagarinao	
<b>13:00-13:30</b>	<i>Invited speaker Prof. A. Martorana (University of Palermo): “<a href="#">Electrode-electrolyte interfaces in protonic ceramic fuel cells: materials and perspectives</a>”</i>
<b>13:30-13:45</b>	<i>N. Williams (Imperial College): “<a href="#">Intrinsic Dipole Moments and Electron Transfer at the MIEC-Gas Interfaces</a>”</i>
<b>13:45-14:00</b>	<i>Y.-T. Chi (Massachusetts Institute of Technology): “<a href="#">Ionic and electronic defect stability under high strain and electric field in perovskite oxides ABO<sub>3</sub></a>”</i>
<b>14:00-14:15</b>	<i>M.-A. Rose (Forschungszentrum Juelich): “<a href="#">Identifying Ionic and Electronic Charge Transfer at Oxide Heterointerfaces</a>”</i>
<b>14:15-14:30</b>	<i>V. Somjit (Massachusetts Institute of Technology): “<a href="#">Early stage propagation of the aluminum oxide/aluminum interface</a>”</i>
<b>14:30-14:45</b>	<i>Break</i>
<b>Session 4 – Devices and characterization methods</b>	
Tentative chair: Dr. Marine Reynaud	
<b>14:45-15:15</b>	<i>Invited speaker Dr. F. Chiabrera (IREC-DTU): “<a href="#">In situ spectroscopy ellipsometry for studying the defect chemistry of oxide thin films</a>”</i>
<b>15:15-15:30</b>	<i>N. Emond (Massachusetts Institute of Technology): “<a href="#">CMOS-Compatible Vanadium Pentaoxide-based Programmable Resistor for Analog Deep Learning</a>”</i>
<b>15:30-15:45</b>	<i>M. P. Wells (University of Cambridge): “<a href="#">A Route to High Performance Micro-Solid Oxide Fuel Cells on Metallic Substrates</a>”</i>
<b>15:45-16:00</b>	<i>M. Krammer (Vienna University of Technology): “<a href="#">La<sub>0.6</sub>Sr<sub>0.4</sub>CoO<sub>3-δ</sub> thin film electrodes under anodic polarization</a>”</i>
<b>16:00-16:15</b>	<i>J.C. Gonzalez-Rosillo (Catalonia Institute for Energy Research): “<a href="#">Highly performing LATP thin film electrolytes for all-solid-state microbattery applications</a>”</i>
<b>16:15-16:20</b>	<i>Wrap up and concluding remarks by A. Tarancon (IREC)</i>