MATERIAIS 2019

MATERIALS FOR A BETTER LIFE ...
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Materials for Energy transition: paths towards sustainability

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Most of the technologies deployed for the energy transition directed to a lower carbon content are materialized by components, systems made of a mix of various materials. Among them some are critical (CRM) since they may undergo a supply risk for several possible reasons (i.e. geological availability, political risk, production concentration, recycling potential,…).
Developing energy technology should integrate the availability of materials they need, not only CRM. In other words, a well suited design approach is mandatory to overcome this criticality issue. In a more general way, during the material developing step, we respect the following moto: "The right material, at the right place and with the right content" has to be observed.
The presentation expectation seeks to demonstrate that a systemic approach is necessary especially when we consider that circular economy is strongly linked with energy transition.

In addition, this presentation aims to show -on the basis of concrete examples- how Research, Development & Innovation can bring solution to make possible and real this energy transition in a sustainable manner. Aspects like design of materials (by minimizing the CRM content), process selection to shape the materials in an efficient manner, remanufacturing/refurbishing, prior to end of life treatment to recover the most valuable materials will be addressed.

Illustration based on examples on energy production & harvesting, energy conversion, energy storage, energy recovery and energy transportation will be discussed.

Presenting author: please, insert your full address and contact details (times new roman 12pt – normal)

On submission please tell us if you intend an oral or a poster presentation