

PRESS RELEASE

2nd workshop on Raising the Lifetime of Functional Materials for Concentrated Solar Power Technology

29.11.2019, Düsseldorf

On 28th November 2017, the Vallourec Deutschland GmbH in Dusseldorf (Germany) hosted a public workshop related to durability of materials for Concentrated Solar Power (CSP). The workshop was associated to the H2020 funded project “Raising the Lifetime of Functional Materials for CSP Technology, RAISELIFE”.

The aim of this workshop was to disseminate project results and to bring together the main actors of industry, plant owners and researchers related to the topic of material and component degradation in the CSP field. The workshop was divided into four different sessions:

- 1) Durability of solar reflectors for CSP
- 2) Absorber coating durability
- 3) Durability issues related to Molten Salt
- 4) Impact of degradation on plant performance and economics

The results of the RAISELIFE project were presented to the audience during these sessions. The sessions focused on how the project results could help in the development of standards. In the afternoon, a World Café was organized to allow discussing the different topics presented by the RAISELIFE consortium members in small groups while having the coffee break., providing the possibility to compare the methodology and results with the external attendees of the workshop. Main points of discussion were: testing conditions for absorber coatings under high flux, the influence of different salt composition and additives on the corrosion rates, the performance and durability of reflectors and anti-soiling coatings, the main degradation types experienced in the plants, standardization and best practices and how degradation is considered in financial models. The workshop was attended by 75 participants, of which 36% came from external industrial companies, 24% from external research and innovation centres and the remaining 40% were members of the RAISELIFE consortium.



The presentations given during the workshop are available online under:
<https://www.raiselife.eu/dissemination/workshops.php>.

The RAISELIFE project is funded by the European Commission with a total budget of EUR 10,509,246.50 (EU contribution of EUR 9,291,722.75). It is coordinated by Dr. Florian Sutter from the German Aerospace Center, DLR, and is being carried out by a consortium of several organizations (industrial partners, SMEs, universities and research organizations) from both the concentrating solar thermal and the materials science areas, offering a broad set of interdisciplinary expertise. Besides European partners from Germany (DLR, Fraunhofer, DECHEMA and AGC), Spain (CIEMAT, Universidad Complutense de Madrid and INTA), France (PROMES, Corning and Vallourec) and Italy (Soltigua), the consortium includes two parties from the associated countries of Israel (BrightSource Industries Israel and HUJI) and Morocco (MASCIR), giving access to in-service testing in CSP relevant environments and commercial installations. The project will finish in March 2020.

The main project goals are:

- Durability testing newly developed functional materials for CSP (TRL4-6)
- Analysis of their failure modes and producing a second generation of life-time optimized materials
- Deriving performance prediction models of the RAISELIFE materials
- Computing the economic impact of material degradation
- Improvement of production process and O&M: automatic coating machine for absorber coatings, sensor development to monitor corrosion in molten salts, definition of a catalogue of best practices to reduce in-service degradation

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Group photo of the participants at the workshop.



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 686008.

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