Session: Durability of photovoltaic modules

The cost efficiency of photovoltaic systems is determined not only by their initial efficiency but also by the service time. Photovoltaic modules are often considered as the most reliable elements of the system and this alleged reliability has led to the long warranty period for modules up to 25 years. The identification and understanding of the degradation modes in PV systems helps to look at the most important factors to produce long-term stable modules and systems. So it is imperative to understand the degradation mechanisms to enable failure specific tests as well as to develop models which can help to overcome the long-term experiments obstacle in order to study PV modules degradation under real conditions. Despite the progress achieved in the last decade, many questions, such as for instance the linearity and the precise impact of climate, pollutants, combined effect of voltage and humidity, etc… have not been properly answered.

The new session aims to bring together the experts in the areas of atmospheric corrosion in materials and assemblies typical for photovoltaic systems (metals/ semiconductors/oxides/polymers/glass), the users and researchers working in photovoltaics and interested in any of the previously identified degradation modes (corrosion of metallic contacts, solders, and silicon, discoloration of photovoltaic modules encapsulate, degradation of zinc oxide, delamination of encapsulant etc …) as well as the experts developing new analytical approaches or new tests procedures for photovoltaic systems.

Papers from both, academy and industry, are invited.

We are looking forward to see you in Spain!

Polina VOLOVITCH and Jean- François GUILLEMOLES

IPVF, CNRS - ChimieParisTech - Ecole Polytechnique