


# Luis Castillon

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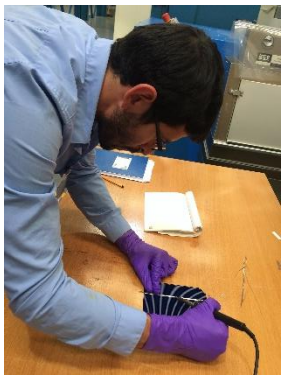
I am a researcher belonging to the polymer ageing group at PCCL in Austria. I switched from chemical engineering to material science and more specifically to polymer science and testing. Previously having worked in manufacture environments, now I focus on research.

Current polymeric materials in backsheets and encapsulants of PV modules have a strong resistance towards degradation which is good for the manufacturers and PV module reliability, but the timeframes for material testing and characterization are short. Still, plenty of outcomes and results can be taken from the stability and ageing behaviour even if they do not show the expected degradation modes. During my time as MSCA fellow I have learned for material ageing research is that time is a key factor. A good experimental planning is needed to make the best out of it, and collaborative work is a must.



**Soldering of a solar cell metallization**

With the results of my current research topics it was possible to present my work in the form of visual contributions at the EU-PVSEC, as well as the SOPHIA workshop of 2018 and 2019.

Key results of my work:

The study of material interactions between backsheets and encapsulant with water and acetic acid.

The characterization and study of the ageing behaviour of backsheet and encapsulants in natural and accelerated weathering environments.

Getting my PhD is still an ongoing project. Finding my work-life balance including academic goals is challenging. I see myself doing research for polymeric materials in the future, hopefully still within the field of PV module reliability and working in projects where I can thrive with my new expertise.

## My Solar-Train story

### "Solar Energy for Life."

In the last year and now more than ever, society became more conscious about the necessity of clean energy and the effects of climate change. Having contributed to under-standing of materials used in PV modules – for the top clean energy source of solar – makes me feel I made my first step towards a world of more reliable PV panels and their polymeric materials components.

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PCCL Polymer Competence Center Leoben

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