



Seminar@ISM

organized by
Communications Group



CNR
Istituto di Struttura
della Materia

When?

February 05, 2025
11:00 AM (CET)

Where?

@ Meeting room
CNR-ISM -
Montelibretti branch
Ed. 15

@MS Teams
<https://tinyurl.com/26lhpkv4>



Energy & Environment



Automotive & Aerospace

05

February 2025

Narges Yaghoobi Nia

Italy - PVSPACE
Italy

Perovskite Photovoltaics for Space Applications

Perovskite solar cells (PSCs) have emerged as a highly promising technology for space applications, offering numerous advantages tailored to the unique challenges of the space environment. Their lightweight nature and high specific power per unit weight are particularly appealing for space missions, as they contribute to reduced launch costs and increased payload capacity. Recent advancements have driven perovskite solar cell efficiencies to record levels, surpassing 26% for single-junction cells and 34.6% for tandem structures an essential factor in space, where energy resources are limited. The thin-film form factor of PSCs allows integration onto flexible and lightweight substrates, enabling deployment on curved or irregular surfaces of spacecraft and satellites. Additionally, their tunable bandgap, high radiation resistance, and solution-processable manufacturing enable large-area, scalable production at low costs, making PSCs ideal for diverse space applications.

Info at

www.ism.cnr.it/seminar-ism

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