

Short Bio

Lionel HIRSCH – CNRS Senior Research Director

[Google Scholar Profile](#), [ORCID Profile](#)

<https://www.ims-bordeaux.fr/> / <https://oembordeaux.cnrs.fr>

With a background in electronics, semiconductor physics, and materials science, I have developed experience at the intersection of electrical engineering and chemistry. During my thesis, I studied the epitaxial growth of erbium-doped calcium fluoride thin films on silicon, focusing on the local environment of erbium ions for potential applications in optical amplifiers. I later contributed to research on gallium nitride semiconductors, particularly in white light emission and UV photodetection, and helped develop ion beam-induced current microscopy to analyze electric fields in diode structures.

In the early 2000s, I transitioned to organic electronics, a field that combines accessible fabrication methods with advanced device performance. My work has benefited from my dual background in physics and chemistry. Over the past 20 years, my research interests are focused on the elucidation of charge transport mechanisms in organic semiconductor devices – organic and hybrid perovskite solar cells – organic photodetectors – Interfaces in organic devices and temperature studies of electro-optical properties – Physico-chemical characterizations