



UNIMORE
UNIVERSITÀ DEGLI STUDI DI
MODENA E REGGIO EMILIA

Dipartimento di Scienze Fisiche,
Informatiche e Matematiche

Oxide-Based Thin-Film Transistors Towards Scalable, Flexible, and Green Electronics

Speaker: Dr. Dianne Corsino

Thursday April 10th, 10 am
Department of Physics,
Informatics and Mathematics
Room M1.4
(Building Mathematics)

[Teams link](#)



Abstract:

The field of thin-film electronics, primarily built using its basic units called thin-film transistors, has progressively evolved to achieve bespoke functionalities. This does not only mean high performance and fast speed, but also flexibility, sustainability, and intelligence. The relevance of flexible electronics lies on its larger envelope encompassing a wider range of innovative applications such as wearables, implantable devices, flexible sensors, and autonomous and intelligent devices. Considering the massive research on and production of electronics system, the topical issue on electronic waste generation has motivated the quest for fabrication approaches to help realize sustainable, green, and biocompatible devices. In this talk, we will cover strategies to realize flexible oxide-based thin-film transistors featuring high performance and fast speed, sustainability, and intelligence by tackling device architecture and tailored fabrication techniques adaptable to novel fragile substrates which are heat-sensitive (plastics), dissolvable (cellulose-based), and biocompatible (hydrogels).

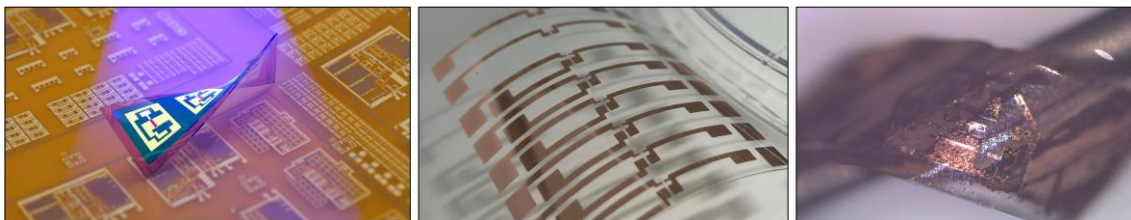


Figure. Away from conventional electronics and into flexible electronics featuring high performance and fast speed (left), sustainability (middle), and intelligence (right).

Contact Person:

Dr. Giuseppe Cantarella, giuseppe.cantarella@unimore.it