



# Organic Electronics

Technical Work Area 36

## An opportunity to get involved in International Standardization

### Objectives

To accelerate full-scale manufacturing of reliable products, Organic Electronics requires the development of effective measurement methods and harmonised test procedures for material and thin-film properties and for device characteristics.

Activities in this TWA will lead to the creation of agreed and validated measurement procedures for relevant properties.

### Background

Organic Electronics encompasses electronic devices based on semiconducting and conducting organic materials. Organic electronic materials behave in significantly different ways to traditional inorganic semiconductors, not just in their electrical, electronic and optoelectronic properties, but also in their mechanical and thermal characteristics.

A range of organic electronic devices and systems are in development worldwide (e.g. LEDs, electronic displays, photodiode devices, solar cells, transistors and complex electronic circuits). These new devices and systems have the potential to provide high performance and low cost solutions, including use in novel applications.

Benefits for organic electronics materials for all applications include lightweight, flexibility, low cost manufacture via printing and roll-to-roll methods.

### Standardization Needs

Pre-standards work is required to develop effective measurement methods for relevant material and device properties, many of which are unique to organic electronics materials and devices.

There are very few existing standards within this technological field. There is a need for coordinating these standardization activities.

The use of measurements will depend on the product development chain and could be targeted at:

- quality control
- materials development
- process optimization
- device design

The current level of usage for the measurements under consideration is high, given the large volume of research and development work

### Work Programme

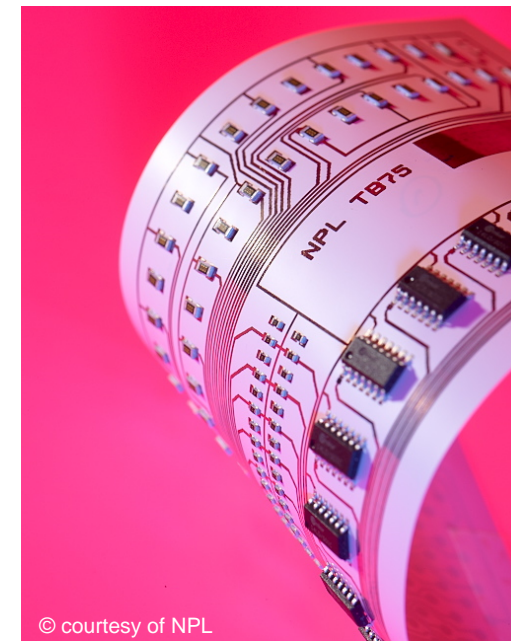
Results of an online survey indicated priority technical areas for VAMAS collaborations:

- Solar Cell Lifetime and Reliability
- Solar Cell Performance
- Encapsulation/Barriers
- LED Lifetime and Reliability
- Electronic Properties
- Transistor Lifetime and Reliability

### Deliverables and Dissemination

Majority of deliverables will be reference methods, reference data and test procedures. These will be disseminated via standards bodies and trade organisations.

**Ideas for new TWA36 activities are always welcome.**



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### Funding

Participation is based on in-kind effort from the volunteers.

**For more information on participation, or to propose project ideas please contact:**

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