

TREASORES

<u>Transparent Electrodes for large Area, Large Scale</u> Production of <u>Organic Optoelectronic Devices</u>



Co-funded by the European Union



FP7 Project 314068



Objective

 Cheaper organic optoelectronics by enabling large-scale production

- For large area light sources and solar cells
- Using roll-to-roll (R2R) processing (like newspaper printing)
- Using low temperatures (< 180°C)



Image courtesy of Fraunhofer-COMEDD

Intermediate Goals

To produce transparent, conductive, flexible barrier foils by exploring:

4 kinds of electrode

3 kinds of barrier/substrate

a 2 kinds of encapsulation



Targets for R2R

- More efficient devices than 2012 state-of-the-art (OLED, OLEC, OPV)
- Encapsulation webspeed > 1 m / minute
- Production volume >> 100 m²

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- Individual devices > 10 x 10 cm
- Substrates cheaper than ITO/PET



Benefits/Impact

No need to use indium tin oxide

- Cheaper, no supply problems
- Energy efficient processing
- Flexible materials imply:
 - Barrier layers and electrodes compatible with R2R production
 - High throughput, easy scale-up
 - Potential new markets for large area and flexible devices



The consortium

- ₅ 5 countries: CH, DE, ES, FI, UK
- Manufacturing partners: Amcor, Sefar, Osram, Rowo Coatings, Canatu, Eight19
- Other companies: Amanuensis, NPL

 Academic partners: Empa, Fraunhofer Society, Technical University of Dresden, University of Valencia, NanoGUNE, University of Aalto



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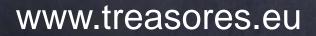




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