





Multiscale Modelling and Characterization to Optimize the Manufacturing Processes of Organic Electronics Materials and Devices (CORNET)

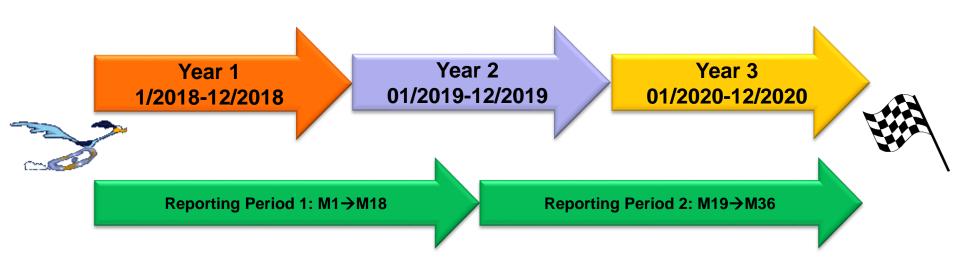




CORNET at a glance

Title: Multiscale Modelling and Characterization to Optimize the Manufacturing Processes of ORgaNic Electronics MaTerials and Devices (CORNET)

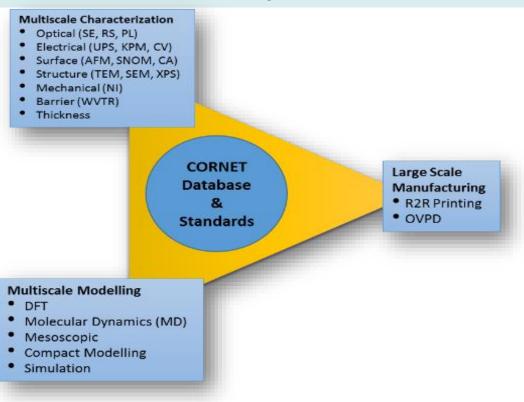
- Type: Research and Innovation Action (RIA)
- Work programme: H2020-NMBP-2016-2017
- **Duration:** 36 Months (1/1/2018-31/12/2020)
- Partners: 11
- Total Budget: 3,993,750 Euros
- EC Contribution: 3,993,750 Euros (100%)
- TRL: $4\rightarrow 6$
- EC PO: Dr. Jorge COSTA DANTAS FARIA (previous PO: Dr. Monique IDIRI)
- Project Website: www.cornet-project.eu



CORNET Concept

- To Develop a Unique EU OIE to Optimize the Large Area OE Materials, Materials Behaviour and Nano-devices (OPVs, PPVs, OLEDs) Manufacturing Processes
- To Link the Nanostructure Features with the Macroscopic Functionality through Multiscale (nano to macro) Characterization & Modelling
- To Strongly Impact the Fast and Reliable Development of New Materials, Devices & Enable Control of related Production Processes (R2R, OVPD), Fabricate Tailored OE Devices and Systems and

Demonstrate to Industrial Applications (e.g. Automotive, Greenhouses)



CORNET Objectives

- 1. Develop an Effective OIE Connecting World-class industrial, Academic & Research Experts in Manufacturing, Multiscale Characterization & Modelling, for Optimization of OE Materials, Materials Behaviour and Process Optimization and for Reliable Database, Citable Protocols and Contribution to Standards (TRL4)
- 2. Multiscale Characterization & Modelling to Optimize OE Materials & Devices Fabrication and Validation of Materials Models for Faster Development Cycle and Time-to-market. (TRL4)
- 3. Optimization of the Fabrication of OPV, PPV and OLED Devices by R2R Printing and OVPD Manufacturing Processes (TRL5)
- 4. Efficient Large scale Fabrication of Tailored (OPV, PPV, OLED) Nano-devices by R2R and OVPD Processes and Demonstration to Industrial Applications (TRL6)

CORNET Consortium (11 Partners from 6 EU countries)

Part no.	Participant Organisation Name	Short Name	Country	Nature
1	Aristotle University of Thessaloniki	AUTh	Greece	HE
2	University of Surrey	USUR	UK	HE
3	University of Ioannina	UOI	Greece	HE
4	Centre National de la Recherche Scientifique	CNRS	France	RES
5	Fluxim	Fluxim	Switzerland	SME
6	AIXTRON	AIXTRON	Germany	IND
7	National Physical Laboratory	NPL	UK	RES
8	Organic Electronic Technologies P.C.	OET	Greece	SME
9	Centro Riserche Fiat	CRF	Italy	RES
10	Granta Design	Granta	UK	SME
11	Hellenic Organic & Printed Electronics Association	HOPE-A	Greece	OTH

TRL 4→5 TRL 4→6 TRL 4→6 TRL 5→6 TRL 5→6 Universities & Research **OIE Database Equipment Manufacturers Reliable OE Device Product Manufacturers** for Modelling & & Standardization & Process Developers **Developers** (Automotive, Energy) Characterization AIXTRON CENTRO RICERCHE FIAT GRANTA Itfn oet Poet **P**oet UNIVERSITY OF SURREY UNIVERSITY OF SURREY

HOPE-

FLUXIM



Thank you for your Attention!



Kick Off Meeting, 28 Jan. 2018, Brussels



Technical Meeting, 13 March 2018, Munich



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