

Commercialisation of Organic and Large Area Electronics – COLAE Project

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Abstract:

The area of Organic and Large-area Electronics (OLAE) is a new scientific and technological field of Nanotechnology with a multitude of potential applications that offer substantial advantages and the possibility for low cost large-scale manufacturing processes in high volumes. Most new technical and business opportunities are perceived to be in energy (Organic Photovoltaics- OPV), displays (Organic Light Emitting Diodes- OLEDs), lighting, signage, sensors (Organic Thin Film Transistor- OTFT), smart labeling and medicine (Organic Biosensors) [1, 2]. The applications of Organic Electronics are already penetrating every commercial and industrial field, aiming to dominate every aspect of life worldwide [3]. Europe has been pulling ahead of the rest of the world in many aspects of OLAE and probably has the most robust vertical integration of effort in OLAE. Actors in OLAE field in Europe involve several big companies, corporate and academic spin-offs [4], start ups as well as Universities and Research Institutes across various European countries that have contributed greatly to the growth of what is widely recognized to be a commercial prospect with immense potential [5]. Since OLAE technologies are becoming ready for incorporation into products of all types there is a need for technology transfer and research commercialization.

Europe's leading organizations are collaborating to form **COLAE – Commercialization of Organic and Large Area Electronics** – a European funded project under the Seventh Framework Programme [6]. The project is designed to promote the commercial exploitation of OLAE technology for the benefit of European industry. COLAE aims to provide to European companies effective access to the knowledge base and technology know-how of key European OLAE partners and their regional OLAE clusters, high-quality training, OLAE product and business idea feasibility support, the best European manufacturing, pilot production facilities and services, important future research topics through workshops, advanced OLAE open innovation process and coordinated support for better IPR landscaping and exploitation.

The expected impacts of COLAE include the growth of OLAE R&D services in Europe, increased effective product demonstration and pilot services, the improved coordination of infrastructure investments, the enlargement of the network of OLAE companies and an increase in the number and capability of OLAE technologists and designers. To achieve this, project activities include awareness of the opportunities given by OLAE. COLAE provides evaluation and verification of opportunities and provides a coordinated support service for their needs. A program of training, providing basic awareness as well as more advanced technology and entrepreneurship courses is being implemented. An OLAE feasibility network is being established and verified by executing selected trial cases in which new users of OLAE will be assisted to examine the feasibility of using OLAE technology into applications. The OLAE feasibility network is an important step towards the concept of a virtual European OLAE foundry, together with the development of an open innovation model for collaboration and rapid commercialization of OLAE.

References

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