AHEAD

Bio-inspired OLED materials for sustainable displays and lighting

The Project

OLED materials are manufactured using chemical synthesis incl. harmful solvents, toxic byproducts. Triplet-emitting materials, which are mostly used in OLED displays, also contain Iridium, which is the 2nd rarest non-radioactive metal. Thus, there is a huge interest in new sustainable materials.

Mimotype develops OLED materials manufacturing methods using bioreactors. Here, synthesis is done using fluorescent protein based recombinant protein production in a water-based environment, mimicking the sustainable processes of nature. The first bioluminescent molecule will be the blue fluorescent dye found in the Umi-Hotaru shrimps "sea fireflies".

Fraunhofer FEP and IAP will contribute with their IP and knowledge in OLED processing using evaporation technologies (FEP) and printing methods (IAP).

The Team

Location: Mimotype Technologies GmbH (Berlin), Fraunhofer FEP (Dresden) and Fraunhofer IAP (Potsdam)

Members: Claudio Flores (Founder & CEO), Danilo Flores (Founder & CSO), Paul Aspacher (Operations Manager), Francesco Rodella (Lead Chemist), Vaishnavi Rao (Lead Materials Scientist), Martin Wieczorek (FEP), Manuel Gensler (IAP)

AHEAD Infos

Batch: 05.2022 **Phase:** 1 **Track:** Licensing

The Business Model

Unique Selling Proposition: The only ecologically seamless OLED emitter material, which is even eatable. From nature to nature.

Unfair Advantage: Synergy of lightning, biocompatibility, and pollution-free process

Revenue Model: Material/product sales, process licensing

Venture Readiness Level

VRL | Ideation | Incubation | Traction | Growth

Technology Readiness Level

TRL | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9

The Side Facts

Customer Focus: B2B

Searching For: Partner, investor

Industry Tags: Chemicals, energy, materials, semiconductors & semiconductor equipment

Technology Tags: Bioengineering, circular economy, clean tech, new materials, wearables technology, virtual reality, smart cities, smart home, preventive healthcare