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Developing New 2D Materials and Heterostructures for Printed Digital Devices



2D-PRINTABLE - Deliverable report

D7.3 – Updated plan for exploitation



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Public summary

Over the past two decades, 2D materials (2DMs) have transformed materials science and nanoscience with their exceptional physical and chemical properties, enabling breakthroughs in optoelectronics, energy, sensing, and composites. However, scaling their technological potential to the macroscale remains a significant challenge. The 2D-PRINTABLE project addresses this by developing sustainable liquid exfoliation methods to create 2DM inks for printing macroscale networks that retain nanoscale properties. Leveraging machine learning and AI, the project aims to integrate 2DMs with advanced electronic properties into printable heterostructures for digital technologies, enabling components like transistors, capacitors, and diodes for high-performance printed devices such as photodetectors, solar cells, LEDs, inverters, and non-volatile memories.

The objective of deliverable D7.3, titled “Updated plan for exploitation” is to provide a thorough overview of the key exploitable results (KERs) identified by 2D-PRINTABLE partners during the project's execution and those envisioned for the post-project phase. For each KER, ownership and intellectual property rights (IPR) will be clearly defined, ensuring transparency and fairness in the attribution of outcomes. This document will also identify the potential end users, target markets, and unique selling points of the proposed KERs. Furthermore, it will address market constraints, highlight untapped opportunities, and propose actionable strategies to overcome the identified challenges. A detailed exploitation roadmap will be included, outlining target companies, alternative approaches, and competitive landscapes. By adopting this comprehensive strategy, D7.3 aims to enhance the impact and practical value of the KERs, aligning them strategically with market needs and fostering their successful deployment.

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Project partners:

#	Partner short name	Partner Full Name	Country
1	TCD	Trinity College Dublin	Ireland
2	UNISTRA	University of Strasbourg	France
3	Uka	University of Kassel	Germany
4	BeD	BeDimensional	Italy
5	TUD	Technical University Dresden	Germany
6	VSCHT	Vysoká škola chemicko-technologická v Praze	Czechia
7	UNR	UNIRESEARCH	Netherlands
8	UniBwM	University of the Bundeswehr Munich	Germany
9	EPFL	École Polytechnique Fédérale de Lausanne	Switzerland

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