

## **H2020-FETOPEN PROJECT PEGASUS APPROVED WITH 4M€ FUNDING**

Project PEGASUS (Plasma Enabled and Graphene Allowed Synthesis of Unique nano Structures) has been approved in the highly-competitive context of EU Horizon 2020 FETOPEN 2016-2017 call, with 4M€ funding. The project will be developed under the leadership of Dr Elena Tatarova and her team with the Plasma Engineering Laboratory (Instituto de Plasmas e Fusão Nuclear - IPFN, Instituto Superior Técnico - IST), joining a consortium that involves IST (Portugal), Centre National de la Recherche Scientifique (France), Institut Jozef Stefan (Slovenia), Kiel University (Germany), Sofia University (Bulgaria) and Charge2C-Newcap Lda (Portugal).

PEGASUS ultimate goal is to create a highly efficient, catalyst/harmful-free novel plasma method along with a proof-of-concept device for a large-scale N-graphene direct synthesis, as well as N-graphene/MnO<sub>2</sub>/Fe<sub>2</sub>O<sub>3</sub>/SnO<sub>2</sub> composites and unique vertical N-graphene arrays grown on metal substrates, via breakthrough research on plasma-enabled singular assembly pathways. PEGASUS framework is uniquely positioned to succeed and raise the Europe competitiveness in the strategic nano synthesis domain, spurring a new European manufacturing / processing platform via the promotion of plasma methods as Key Enabling Technology for highly-controllable and "green" assembly of atom-thick hybrid nanostructures, and by replacing long existing materials with new cost-effective, higher-performance ones.

The kick-off of PEGASUS is scheduled for November 2017.

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