

# AGENDA

## Internal meeting on Graphene 3D Deliverable Report D 2.1 “Materials specification”

**Venue:** IPCB-CNR, Portici, Italy

**Date:** 15 February 2017

**Topics:** Five partners (IPCB-CNR, NARRANDO, UNISA, IMech and NANOTECHLAB) discussed about the choose of the materials of interest to be synthesized, characterized and included in the project for further design of 3D printing materials. The discussion focused on the suitable graphene and carbon nanotubes modifications, different types and degree of purity. Another important aspect regards the required characterization.

### **Participants:**

*From IPCB-CNR, Portici:* Dr. Marino Lavorgna and Dr. Giovanna Buonocore;

*From IPCB-CNR, Pozzuoli:* Dr. Clara Silvestre and Dr. Sossio Cimmino;

*From IPCB-CNR, Napoli:* Dr. Roberto De Santis;

*From UniSA, Salerno:* Dr. Patrizia Lamberti;

*From Narrando, Salerno:* Prof. Paolo Ciambelli, Prof. Maria Sarno, and Dr. Marcello Casa;

*From IMech-BAS, Sofia:* Prof. Rumiana Kotsilkova

*From NanoTechLab, Sofia:* Dr. Evgeni Ivanov

13:00-15:00 Welcome

13:10 – 15:00 Visit at Laboratories; demonstration of the facilities, apparatus, and extruders for polymer processing at IPCB-CNR in Portici.

15:00 – 15:30 Short summary of the project and of the research target related to materials suitable for SLS printing. *Dr. Marino Lavorgna*

15:30 – 16:00 Description of the 3D printing apparatus (FDM, SLS). *Dr. Roberto De Santis.*

16:00 - 17:00 Discussion on the polymeric materials, graphene, carbon nanotubes and the market benchmarks that will be used during the project. *Dr. Marino Lavorgna and Prof. Paolo Ciambelli.*

**Decisions:** For the polymers: PLA, HAVOH, TPU, PDMS were chosen. Nanomaterials to be used in the project will be identified in: few layer graphene (FLG), reduced graphene oxide (rGO) and carbon nanotubes (MWCNT), which will be bought from third companies and provided by NARRANDO. Also, the market benchmarks were identified: BLACK MAGIC and GRAFYLON 3D. Finally, it has discussed the selection criteria that will be used to identify the best composite materials. This conclusion will be part of the Deliverable 2.1“Material Specification”.