

Graphene Technology Platform at BASF

Matthias Schwab

BASF SE

Technology Incubator - Graphene Research

GVM/I - J550, 67056 Ludwigshafen, Germany

Email: matthias.schwab@basf.com

Abstract:

Graphene as an emerging material has recently spurred the interest of scientific research both in academia and industry. At BASF graphene and graphene materials are currently being studied for several potential fields of application. We have set up a graphene technology platform aiming at the systematic investigation of this new carbon material fabricated either by top-down or bottom-up procedures. Owing to its appealing electrical conductivity, graphene can be used for conductive formulations and coatings as well as for polymer composite materials with antistatic properties. Also, graphene may serve as a new carbon material thus replacing or complementing traditional carbon black additives in lithium-ion batteries as well as activated carbons in supercapacitor devices. It is also intended to evaluate graphene-based transparent conductive layers for their use in displays, organic solar cells and organic light emitting diodes. On a longer perspective the semi-conducting properties of graphene nanoribbons fabricated from chemical bottom-up approaches shall be explored.

The talk will focus on the recent activities of BASF in the field of graphene and provide an evaluation of this promising material from an industrial point of view.