

TALLAIRE, Alexandre

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Biography

Alexandre TALLAIRE graduated in Material Science and Surface Treatment from the engineering school (ENSIL) of Limoges (France) in 2000. He then spent 2 years at the University of Aveiro in Portugal (2000-2002) in the department of Ceramics and Glasses to obtain a European Master degree with a main focus on the deposition of diamond by hot filament CVD for mechanical applications. After joining LIMHP lab in Villetaneuse, he obtained a PhD degree in process engineering on single crystal diamond growth for power electronics from the University of Paris 13 (2005).

He then worked as a research associate at Nippon Telegraph and Telephone (NTT-BRL, Japan) on the fabrication of diamond field effect transistors. In 2007 he moved to the semiconductor industry as a Process Scientist at Aixtron Ltd (Cambridge, UK) where he was involved in the development of Metal-Organic Chemical Vapour Deposition (MOCVD) equipment for III-V and II-VI materials (GaN, GaAs, ZnO).

In 2009, he was appointed a CNRS researcher at LSPM (University Paris 13) to work on the growth of advanced bulk single crystal diamonds with a particular focus on the control of defects such as dislocations and impurities. He then mostly specialized in studying colour centres in diamond for quantum technologies. In 2017 he was promoted a research director at CNRS. He then joined IRCP (Chimie ParisTech) to pursue the development of quantum grade materials that includes diamond but also rare-earth doped materials.

His main interests are in material science, process engineering, diamond growth, plasma assisted chemical vapour deposition as well as defects in materials and the measurement of their optical and electronic properties. He is the author or co-author of more than 100 peer-reviewed papers.

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