

CURRICULUM VITAE

Dr. Georgi Lalev

PERSONAL INFORMATION

Address: 26, Gibson Close, Cardiff, CF14 5LL, UK
Phone +44 029 20870580
E-mail: glalev@yahoo.com
Nationality Bulgarian

AREAS OF EXPERTISE

- **Materials characterization techniques:**
 - high-resolution transmission electron microscopy (HR- TEM) and scanning transmission electron microscopy (STEM), cryo TEM, HR-TEM tomography (SerialEM) and 3D image reconstruction (IMOD), TEM/STEM lamella preparation employing FIB, confocal and fluorescence microscopy, failure analysis employing focus ion beam (FIB) scanning electron microscopy (SEM), X-ray diffraction (XRD), energy dispersive X-ray (EDX), atomic force microscopy (AFM), Photoluminescence (PL), white-light interferometry, etc.;
- **Manufacturing:**
 - nano-manufacturing, (nano) device prototyping, tooling / master fabrication, focused ion beam (FIB) machining, Nanoimprint Lithography (NIL), Raith Lithography Software, electroforming, various thin film deposition and epitaxial techniques, photolithography, wet and dry etching.
- **Replication techniques:**
 - UV- nano-imprint lithography (NIL), Injection molding, hot embossing, electroforming.

EMPLOYMENT HISTORY

2014 – Present Institute of Polymers, BAS, Sofia, Bulgaria

Position - visiting researcher,

2013 - Present School of Chemistry, Cardiff University, Cardiff, UK

Position - Manager of HR-TEM facility.

2011-2012 University of Chemical Technology and Metallurgy, Sofia, Bulgaria

Position - Lecturer in Micro and Nano-manufacturing;

2006- 2010 Manufacturing Engineer Centre (MEC), Cardiff University, UK

Position - Research Fellow in Nanomanufacturing,

Head of Nano-Manufacturing Technologies (NMT) Laboratory

2004- 2005 Manufacturing Engineer Centre (MEC), Cardiff University, UK

Position - Project manager/Research Associate in micro- and nano-manufacturing.

Apr-Aug.2004 Institute of Multidisciplinary Research for Advanced Materials (IMRAM), Tohoku University, Sendai, Japan

Position - Postdoctoral Researcher

2001-2002 Institute of Multidisciplinary Research for Advanced Materials (IMRAM), Tohoku University, Sendai, Japan

Position - Research Associate - research on purification of copper by plasma-zone melting.

EDUCATION

2000 - Mar. 2004

Ph.D. degree in Engineering , Tohoku University, Sendai, Japan
Thesis title: “*Hot Wall Epitaxy of $Cd_{1-x}Zn_xTe$ ($X=0, 0.04$) on $Si(111)$ and Isothermal Vapour Phase Epitaxy of $Hg_{1-x}(Cd_{1-y}Zn_y)_xTe/Si(111)$ ”*

2002-2004

Doctoral course
Institute of Multidisciplinary Research for Advanced Materials (IMRAM), Tohoku University, Sendai, Japan,
Research on the heteroepitaxy of II-VI compounds on Si substrates.

1989-1994

B.Sc. and M.Sc. in Chemical and Metallurgical Engineering
University of Chemical Technology and Metallurgy, Sofia, Bulgaria
Major in "Production of Ferrous Metals" Specialty: "Plasma Metallurgy"