Name of the Partnering Organization:	**University of Nottingham**	
Location (town, country):	Nottingham, United Kingdom	
Web site address:	http://www.nottingham.ac.uk	

Brief description of the organization

The University of Nottingham is ranked in the top 30 European universities. It is a major centre for research and teaching in the UK, with world-class research outputs including Nobel-winning developments of magnetic resonance techniques. It has overseas campuses in China and Malaysia, and an established track record of European and International collaboration. It has a research portfolio worth over ∈300m, which funds a total of 2300 research projects. The University's School of Physics and Astronomy was rated joint second in the UK in terms of research quality in the recent national Research Assessment Exercise.

Description of the research group

The Spintronics and Ferromagnetic Semiconductors Research in the School of Physics and Astronomy is among the world-leaders in the development and investigation of magnetic semiconductor structures. We have produced III-Mn-V films with the highest Curie temperature recorded worldwide. We have a long established track record in the growth and study of semiconducting and hybrid heterostructures for microelectronic, optoelectronic and spintronic applications. We have participated in FP4, FP5, FP6 and FP7 pan-European research projects in spintronics as well as solar cell development. We currently co-ordinate the Marie Curie Initial Training Network *SemiSpinNet*, and are members of the UK National Centre for III-V Technologies. Our interests, experience and expertise in the growth and advanced characterization of novel semiconducting, magnetic and hybrid materials is of particular relevance to the EAgLe proposal. Key facilities include a suite of interlinked thin film growth facilities, including a 14-port MBE reactor equipped with RHEED and band-edge spectrometry for *in-situ* monitoring of the growth process, and a magnetron sputterer for co-deposition of metal and oxide thin films; class 10000 clean rooms with a full range of facilities for photolithography, contact deposition and bonding, and scanning electron microscopy with direct-write capability; and state-of-the-art facilities for structural, magnetic and transport characterization.

Selected list of relevant publications

Spin-orbit driven ferromagnetic resonance. D Fang, H Kurebayashi, J Wunderlich, K Vyborny, LP Zarbo, RP Campion, A Casiraghi, BL Gallagher, T Jungwirth, AJ Ferguson, Nature Nanotechnology 6, 413 (2011).

Magnetic linear dichroism in the angle-dependence of core-level photoemission using hard x-rays. KW Edmonds, G van der Laan, NRS Farley, RP Campion, BL Gallagher, CT Foxon, BCC Cowie, S Warren, TK Johal, Physical Review Letters 107, 197601 (2011).

Nanoscale Potential Fluctuations in (GaMn)As/GaAs Heterostructures: From Individual Ions to Charge Clusters and Electrostatic Quantum Dots. AP Wijnheimer, O Makarovsky, JK Garleff, L Eaves, RP Campion, BL Gallagher, CT Foxon, Nano Letters 10, 4874 (2010).

Key researcher's CV

Prof BL Gallagher is the group leader and is an expert on transport properties of transition metals, semiconductor heterostructures, magnetic semiconductors and spintronic devices. He recently co-ordinated the FP7 NAMASTE project focussed on spintronic applications of metal and semiconductor nanostructures, and was Nottingham principal investigator of the FP6 NANOSPIN (2006-09), FP5 FENIKS (2001-05) and FP4 SPIDER (1997-2000) projects on aspects of semiconductor spintronics. He was coordinator of the UK EPSRC "Network on Spintronics" (2001-04) and a Leverhulme Royal Society Senior Research Fellow (2000-2001). He has co-authored over 200 papers and 3 patent applications, has given over 40 invited talks at international conferences, and has supervised 12 PhD students.