

WP 3: Enhancement of IF PAN human resources through recruitment of experienced researchers and trainings

Task 3.5 – Recruitment of the experienced researcher in the field of electron microscopy



Researcher in Electron Microscopy

The position is occupied from 01.03.2014

Dr. Tian Li

THE HIRSCH INDEX

The ***h*-index** is 9

Authorships of more than 40 articles in peer-reviewed science and engineering journals and one patent.

EDUCATION

- MSc. Condensed matter Physics, Jilin University, China, 1994
- PhD Physics of solid state and semiconductor, Nottingham University, U.K., 2003

ACADEMIC EXPERIENCE

- 2013 - 2014, Assistant professor, IFPAN, Poland
- 2006 - 2013 Research Associate, Johannes Kepler University, Linz, Austria.
- 2005 - 2006 Research Associate, Arizona State University, Tempe, Arizona, U.S.A.
- 2003 - 2004 Research Associate, Karlsruhe University, Karlsruhe, Germany.

Dr. Tian Li has a long-standing experience in the growth of semiconductors and especially in their characterization *via* transmission electron microscopy (TEM) and related techniques (HRTEM, SAED, EELS, HAADF, STEM) and contributed to the development of the extensive protocol of fabrication and characterization (including epitaxy, synchrotron-radiation techniques, magnetic, magneto-optical and microscopy techniques) that has allowed to give over the recent years a recognized contribution to the understanding of magnetic semiconductors. Specializing in operation of TEM, he is also skillful to interpret the TEM data and simulate HRTEM images by using various software packages (DigitalMicrograph, JEMS, FRWRtools and QSTEM) and scripting his own Matlab codes as needed.

Dr. Tian Li focuses his recent research interests on magnetic semiconductors, in particular, the HRTEM and off-axis/in-line holography study of magnetic nanoparticles. By simulation and phase retrieval techniques, he is expecting to work out the strength and distribution of local magnetic field in a nano-scale.

Considering the missions of Task 3.5 in EAGLE project, which is expecting to set up a new direction of experimental activity within IFPAN bridging the field characterization of newly developed nanoprecipitates in wide band-gap semiconducting materials and structures with the use of Lorentz microscopy and electron holography methods, Dr. Tian Li believes that, to work under this project suit best to the next step of his scientific life.