



Alexander Grüneis

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Date and place of birth: 6.6.1975, Linz
Family status: married, no children
Citizenship: Austria

Education

- **Tohoku University** Sendai, Japan
Doctor of Philosophy in Physics April 2001 - September 2004
– Thesis: “Resonance Raman Spectroscopy of Single Wall Carbon Nanotubes”
Advisor: Prof. R. Saito
- **Vienna University** Vienna, Austria
Mag.rer.nat. (Master of Science in Physics) October 1994-March 2001
– Thesis: “Oscillatory behaviour of Raman Modes in Single Wall Carbon Nanotubes”
Advisor: Prof. H. Kuzmany

Research Experience

- **Leibniz Institute for Solid State and Materials Research** Dresden, Germany
PostDoc position December 2004 - Present
– Found that electronic correlation effects strongly renormalize the electronic dispersion of graphene and graphite from angle-resolve photoemission spectroscopy measured at BESSY II
– Built a high-vacuum chemical vapour deposition setup for growth of carbon nanostructures
- **Tohoku University** Sendai, Japan
PhD student April 2003 - September 2004
– Calculated the selection rules for dipole transitions for single wall carbon nanotubes and graphene
- **University of Electro-Communications** Tokyo, Japan
PhD student April 2001 - March 2003
– Determined the phonon dispersion relation of graphene from double-resonant Raman features
- **Vienna University** Vienna, Austria
Master course student February 2000 - March 2001
– Determined the nanotube diameter distribution of laser ablation samples by resonance Raman spectroscopy from the oscillation of the radial breathing mode

Publication Activity

- Published 38 refereed publications with over 570 citations in total (index $h = 15$), 6 papers as first author, two papers are currently under review
- the paper in J.Phys.Chem.B,110(42):20973 (2007), was selected a research highlight by Nature Nanotechnology: "Nanotube synthesis: Ferrocene's double act" doi:10.1038/nnano.2006.107
- Participated in over 20 international conferences with an oral or poster contribution; published 13 conference proceedings; 19 oral contributions at conferences (7 invited talks)

Fellowships

- **Marie Curie Individual Fellowship**
European Union *July 2006-June 2008*
- **Schrödinger Fellowship**
Fonds zu Förderung der wissenschaftlichen Forschung (Austria) *June 2005-June 2006*
- **Monbukagakusho Fellowship**
Japan Ministry of Education, Culture, Sports and Science *April 2001-September 2004*
- **Erasmus Scholarship**
European Union *June 1998-May 1999*

Short Research Visits and Beamtimes

- **Massachusetts Institute of Technology** Boston, USA
hosted by Prof. M.S. Dresselhaus *November 2002*
- **Vienna University** Vienna, Austria
hosted by Prof. H. Kuzmany *Oct. 2004, Nov. 2005, Feb. 2006, Nov. 2006*
- **Tohoku University** Sendai, Japan
hosted by Prof. R. Saito *June 2006*
- **University of Electro-Communications** Tokyo, Japan
hosted by Prof. T. Kimura *July 2006*
- **European Theoretical Spectroscopy Facility** San Sebastian, Spain
hosted by Prof. A. Rubio *October 2006*
- **Institute for Nanotechnology, ISEN** Lille, France
hosted by Dr. L. Wirtz *March 2007*
- **Beamtime at BESSY II** Berlin, Germany
together with Dr. T. Pichler *Feb. 2006, Aug. 2006, Mar. 2007 (next: Aug. 2007)*

Referee Activity

- Peer reviewer for Nanotechnology/Journal of Physics (IOP) (reviewed 5 research articles)
- Peer reviewer for Applied Physics A (reviewed 1 research article)
- Peer reviewer for Phys.stat.sol.(b) (reviewed 1 research article)

Relevant Skills

Language proficiencies: German, English (TOEFL score: 597 points), Japanese (basic)

Laboratory skills: Dilor XY Raman, Bruker optical spectrometers, ultra-high vacuum techniques, synchrotron experience (BESSY II), computer-instrument interfacing, TEM, SEM, AFM, lithography, chemical vapour deposition.

Numerical simulations: Fortran, MPI, Mathematica, Maple

Computer Networking: Installed and maintains a Debian Linux Server

Applications: L^AT_EX, LabVIEW, IgorPro, OpenOffice, MS Office XP

System Programming: C/C++, Python, 68000 Assembly