



## Mathias M. Schubert

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### Professional Preparation

|                    |         |   |      |
|--------------------|---------|---|------|
| Univ. Leipzig, FRG | Physics | Privatdozent (Lecturer)                                 | 2003 |
| Univ. Leipzig, FRG | Physics | Dr. rer. nat. habil. (2 <sup>nd</sup> PhD-Habilitation) | 2003 |
| Univ. Leipzig, FRG | Physics | Dr. rer. nat. (Ph.D)                                    | 1997 |
| Univ. Leipzig, FRG | Physics | Science Diploma (M.Sc.)                                 | 1994 |

### Appointments

|                           |                                   |                       |
|---------------------------|-----------------------------------|-----------------------|
| Univ. of Nebraska-Lincoln | Associate Professor, tenure-track | 2006-                 |
| Univ. Paris, France       | Visiting Research Professor       | 2005                  |
| Univ. Linköping, Sweden   | Visiting Research Professor       | 2002                  |
| Univ. Leipzig, FRG        | Assistant Professor               | 2000-2005             |
| Univ. of Nebraska-Lincoln | PostDoc                           | 1997, 1998, 1999-2000 |
| Univ. Leipzig, FRG        | Graduate Assistant                | 1995-1998             |

### Selected Publications (total: 177 journal articles, 2 books, 8 book chapters).

#### 5 most recent

1. V. Darakchieva, T. Hofmann, M. Schubert, B. E. Sernelius, B. Monemar, P. O. A. Persson, F. Giuliani, E. Alves, H. Lu, and W. J. Schaff, *Free electron behavior in InN: on the role of dislocations and surface electron accumulation*, *Appl. Phys. Lett.* **94**, 022109 (2009)
2. D. Schmidt, B. Booso, T. Hofmann, E. Schubert, A. Sarangan, and M. Schubert, *Monoclinic optical constants, birefringence, and dichroism of slanted titanium nanocolumns determined by generalized ellipsometry*, *Appl. Phys. Lett.* **94**, 011914 (2009)
3. D. Schmidt, B. Booso, T. Hofmann, E. Schubert, A. Sarangan, and M. Schubert, *Generalized ellipsometry for monoclinic absorbing materials: determination of optical constants of Cr columnar thin films*, *Opt. Lett.* in press (2009), preprint available online [www.opticsinfobase.org](http://www.opticsinfobase.org)
4. M. F. Saenger, T. Höing, B. W. Robertson, R. B. Billa, T. Hofmann, E. Schubert, and M. Schubert, *Polaron and Phonon properties in proton intercalated amorphous tungsten oxide thin films*, *Phys. Rev. B* **75**, 245205 (2008)
5. T. Hofmann, C.M. Herzinger, C. Krahmer, K. Streubel, and M. Schubert, *The optical Hall effect*, *phys. stat. sol. (a)* **205**, 779 (2008)

#### 5 other

1. T. Hofmann, V. Gottschalch, M. Schubert, *Dielectric anisotropy and phonon modes of ordered indirect-gap Al<sub>0.52</sub>In<sub>0.48</sub>P studied by far-infrared ellipsometry*, *Appl. Phys. Lett.* **91**, 121908 (2007).
2. T. Hofmann, U. Schade, W. Eberhardt, C. M. Herzinger, P. Esquinazi, M. Schubert, "Terahertz magneto-optic generalized ellipsometry using synchrotron and black-body radiation", *Rev. Sci. Instr.* **77**, 063902 (2006).
3. T. Hofmann, U. Schade, K. C. Agarwal, B. Daniel, C. Klingshirn, M. Hetterich, C. M. Herzinger, M. Schubert, *Conduction-band electron effective mass in Zn<sub>0.87</sub>Mn<sub>0.13</sub>Se measured by terahertz and far-infrared magneto-optic ellipsometry*, *Appl. Phys. Lett.* **88**, 043105 (2006).

4. M. Schubert, *Another century of Ellipsometry*, *Ann. Phys.* **15**, 480 (2006).
5. M. Schubert, *Infrared Ellipsometry on Semiconductor Layer Structures* (Springer, 2004).

**Invited Presentations:** 25 Invited key note and conference lectures during meetings of the German and American Physical, Materials, and Optical Societies (AVS, APS, MRS, SPIE etc.), and >75 Colloquia and Seminars in international universities and companies.

### **Honors, Awards**

- The *Ludwig-Genzel-Award* (2006) for contributions to generalized infrared spectroscopic ellipsometry and application to numerous problems in solid state science. The prize is sponsored by Bruker, and awarded every two years.
- Fellowship of the *German National Merit Foundation* (1995-1997).
- LIMAT Visiting Professorship, Universities Fribourg and Bern, Switzerland, 2009

### **Synergistic Activities**

Co-organizer of the 2007 International Conference of Spectroscopic Ellipsometry; Guest editor Wiley-Interscience: *Physica Status Solidi* (proceedings ICSE4); Topical editor: *Journal of the Optical Society of America A* (2005-2007); Co-founder and executive board member: German Ellipsometry Association (2000-); Co-organizer: Biennial European Workshop Ellipsometry (2000-); Faculty Executive Committee member (2007-); Ellipsometry in Materials Research Symposium Organizer AVS (2009-); Reviewer: NSF; German Science Foundation; Univ. of Nebraska-Lincoln

### **Selected non UNL collaborators (last five years)**

(last five years): W. J. Schaff, Cornell; A. Diebold, Univ. At Albany; A. A. Sierenko, NJIT, M. Bockowski, M. Dressel, B. Gompf Stuttgart FRG, M. Grundmann Leipzig FRG, V. Darakchieva, P. P. Paskov, B. Monemar, Linkoping Sweden; F. Scholz Ulm FRG; D. Hommel Bremen FRG; K. Streubel OSRAM OS FRG; Y. Nanishi, Ritsumeikan University, Japan; L-C. Cheng, National Taiwan Univ.; W. Tu, National Sun Yat-Sen Univ., Taiwan; M. Stan EMCORE Corp.; C. M. Herzinger J. A. Woollam Co.; M. Mross, T. Lowell Vermont Photonics Inc.;

### **Graduate and Postdoctoral Advisors**

B. Rheinländer: Uni Leipzig; J. A. Woollam: UNL

### **Thesis Advisor and Postgraduate-Scholar Sponsor**

T. Hofmann (M.Sc. 2000, Ph.D 2004, PostDoc 2004-) now UNL; J. D. Hecht (M.Sc. 2001 U-Lei) Now Attorney (Munich, Germany); A. Kasic (Ph.D 2002 U-Lei) Now Quimonda (Dresden, Germany); G. Leibiger (supervised together with V. Gottschalch, Ph.D 2004 U-Lei) now with Freiburger AG (Freiberg, Germany); J. Sik (PostDoc 2001 U-Lei) Now On-Semiconductors (Czech Republik); C. Bundesmann (Ph.D 2005 U-Lei) now PostDoc IOM Leipzig (Leipzig, Germany); N. Ashkenov (M.Sc. 2002 U-Lei) now Opteg (Leipzig, Germany); B. Mbenkum (M.Sc 2003 U-Lei) now PostDoc, Max-Planck-Institute Stuttgart (Germany); C. von Middendorf (M.Sc. 2005 U-Lei) now PhD student Max-Planck-Institute Heidelberg (Germany); M. Saenger (M.Sc. 2006 U-Lei); current PhD students: R. Voora, D. Schmidt, M. Saenger, A. Sarkar, E. Montgomery (all at UNL), Claudia Cramer (at OSRAM OS Germany)