Curriculum Vitæ

Personal Data

Name:	Stadelmann
Given Names:	Tim Oliver
Address:	Haldenweg 24 79853 Lenzkirch Germany
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Date of birth:	June 21st, 1977

Professional Experience

2016-01 / to date — *Head of Epitaxy Department* at Fraunhofer Institute for Applied Solid State Physics (IAF), Tullastraße 72, 79108 Freiburg, Germany

- Overall responsibility for a department of scientists and technicians dedicated to the deposition of high performance compound semiconductor layers

2012-11 / 2015-12 — *Research Fellow* at Fraunhofer IAF

- Process development and small volume manufacturing of infrared image sensors based on III/V compound semiconductors

2011-10 / 2012-10 — *Senior Staff Engineer—Systems* at Kulicke & Soffa Pte. Ltd., 23A Serangoon North Ave. 5 #01-01, Singapore 554910

- Mentoring and training engineers during handover of a new equipment generation to sustaining engineering
- Compiling specifications for equipment customizations in close contact with customers and coordinating their implementation

2009-07 / 2011-10 — *Staff Engineer—Systems* at Kulicke & Soffa Die Bonding GmbH, Andhauserstrasse 52, 8572 Berg/TG, Switzerland

- Leading a cross-site project to improve the handling of small chips with process, hardware, and software solutions
- Failure analysis and system optimization at customer sites

2007-11 / 2009-06 — *Advanced Systems Engineer* at Alphasem GmbH
(since 2009-04: Kulicke & Soffa Die Bonding GmbH)

- Technical coordination of module development across sites

2006-12 / 2007-11 — *Systems Engineer* at Alphasem GmbH

- Development of system, component, and software specifications
- Design and execution of experiments and qualification tests

2003-10 / 2004-09	*Lecturer in Physics* at Hertford College, University of Oxford; teaching tutorials on solid state physics
2003-01 / 2003-03	*Physics Tutor* at The Queen's College, University of Oxford; teaching tutorials on electromagnetism
2001-10 / 2002-09	*Demonstrator* at the Department of Physics, University of Oxford; teaching at physics lab classes, e.g. on electronic measurements

Education

2000-10 / 2006-09	D.Phil. in Semiconductor Physics at the University of Oxford, thesis title: *Antidot Superlattices in InAs–GaSb Double Heterostructures: Transport Studies* (viva 2007-01-31, graduation 2007-10-20)
1996-10 / 2000-09	Studies in Mathematics and Physics at the University of Cambridge; B.A., M.Sci., Honours Class II.1 (graduation as M.A. 2003-07-19)
1987-08 / 1995-06	Secondary education at Friedrichsgymnasium in Kassel (Germany); *Abitur* (university-entrance diploma), grade 1,0 (very good)

Miscellaneous

1995-07 / 1996-04	Military Service at gemischtes Flugabwehrregiment 2 (air defence artillery) in Fuldatal-Rothwesten

Skills

Professional:	• Leadership with and without formal authority • Product development • Project management • Requirements engineering
Science:	• Semiconductor physics • Electronic transport measurements of semiconductor structures • Cryogenic experiments
Technology:	• Processing of III/V compound semiconductor devices • Semiconductor packaging, notably die attach • Atomic force and scanning electron microscopy
Languages:	• Fluent in German and English • Basic knowledge of French, Latin, Ancient Greek
Computing:	• Comprehensive knowledge of C and C++ • Experience in problem solving using Mathematica, Visual Basic for Applications, LabView, Fortran, Java, Perl, TCL

Publications

[1] R. Rehm, V. Daumer, T. Hugger, N. Kohn, W. Luppold, R. Müller, J. Niemasz, J. Schmidt, F. Rutz, T. Stadelmann, M. Wauro, and A. Woerl. Type-II Superlattice Infrared Detector Technology at Fraunhofer IAF. In B. F. Andresen, G. F. Fulop, C. M. Hanson, and P. R. Norton, editors, *Infrared Technology and Applications XLII*, volume 9819 of *Proceedings of SPIE*, 2016.

[2] A. Marte and T. O. Stadelmann. Method and apparatus for inspecting a semiconductor chip prior to bonding, December 6 2016. US Patent 9,515,045.

[3] M. Walther, R. Rehm, T. Stadelmann, V. Daumer, D. Eich, S. Hanna, and H. Figgemeier. Current situation of IR sensor technical basis in Germany. *Journal of the Japan Society of Infrared Science and Technology*, 25(1):57–65, 2015.

[4] R. Rehm, F. Lemke, M. Masur, J. Schmitz, T. Stadelmann, M. Wauro, A. Woerl, and M. Walther. InAs/GaSb superlattice infrared detectors. *Infrared Physics & Technology*, 70:87–92, May 2015.

[5] T. Stadelmann, A. Woerl, M. Wauro, V. Daumer, J. Niemasz, W. Luppold, T. Simon, M. Riedel, R. Rehm, and M. Walther. Development of Bi-Spectral InAs/GaSb Type II Super lattice Image Detectors. In B. F. Andresen, G. F. Fulop, C. M. Hanson, and P. R. Norton, editors, *Infrared Technology and Applications XL*, volume 9070 of *Proceedings of SPIE*, 2014.

[6] F. Rutz, P. Kleinow, M. Walther, R. Aidam, W. Bronner, L. Kirste, J. Niemasz, R. Rehm, J. Schmitz, T. Stadelmann, M. Wauro, A. Woerl, A. Sieck, and J. Ziegler. Infrared photodetector development at Fraunhofer IAF. In M. Razeghi, E. Tournie, and G. J. Brown, editors, *Quantum Sensing and Nanophotonic Devices XI*, volume 8993 of *Proceedings of SPIE*, 2014.

[7] T. O. Stadelmann and R. J. Nicholas. Creating oxide dot arrays on III-V semiconductors by AFM lithography. In A. G. Cullis and P. A. Midgley, editors, *Microscopy of Semiconducting Materials 2003*, number 180 in Institute of Physics Conference Series, pages 661–664, 2003.

[8] T. O. Stadelmann, B. Kardynał, R. J. Nicholas, K. Takashima, and N. J. Mason. Magnetotransport studies of antidot superlattices in coupled two-dimensional electron-hole gases. *Physica E: Low-Dimensional Systems & Nanostructures*, 12(1–4):293–295, January 2002.

[9] J. J. Ludlam, T. O. Stadelmann, S. N. Taraskin, and S. R. Elliott. Numerical analysis of the vibrational eigenmodes of a 2D disordered lattice. *Journal of Non-Crystalline Solids*, 293:676–681, November 2001.