Curriculum Vitae

Franziska C. Beyer

Address

Paul Müller Strasse 47
D-09599 Freiberg, Germany
Phone: +49 3731 39 2731 (work)
Email: franziska.beyer@physik.tu-freiberg.de

Personal Details

Birth name: Täschner
Date of birth: July 15, 1980
Place of birth: Dresden, Germany
Family status: married, 3 daughters
Citizenship: German

Education

04/2006–10/2011	Semiconductor Materials Group, Department of Physics, Chemistry and Biology, Linköping University: PhD thesis: "Deep levels in SiC"
10/2000–03/2006	TU Bergakademie Freiberg, course of studies: "Angewandte Naturwissenschaft" (Applied Natural Science) Specialization: "Naturwissenschaftliche Grundlagen: Stoffe der Mikroelektronik" (Scientific Principles: Materials for Microelectronics)
09/1998–07/2000	Grammar school: Vitzthumgymnasium Dresden, Germany
09/1997–06/1998	Grammar school: Lycée International des Pontonniers, Strasbourg, France

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Scientific Work

10/2015–	Institute of Applied Physics, TU Bergakademie Freiberg, Germany: young researcher group: "Defekt-Engineering in wide band gap semiconductors for applications in opto and power electronics"
01/2012–09/2015	Institute of Applied Physics, TU Bergakademie Freiberg, Germany: PostDoc
11/2011–12/2012	Semiconductor Materials Group, Department of Physics, Chemistry and Biology, Linköping University, Sweden: PostDoc

04/2006–10/2011	PhD studies in Semiconductor Materials group, Department of Physics, Chemistry and Biology, Linköping University, Sweden: *Electrical characterization of deep levels in silicon carbide.*
08/2005–01/2006	Institute of Experimental Physics, TU Bergakademie Freiberg, Germany diploma thesis on *Characterisation of deep traps in organic semiconductors, Installation of a new setup and first results*
04/2004–09/2004	Institute of Experimental Physics, TU Bergakademie Freiberg, Germany student research project on *Realisation of TSC measurements for organic semiconductors*
07/2001–08/2001	Zentrum Mikroelektronik Dresden, ZMD, Germany physics internship in the group of photolithography

Expertise

- Defect characterization:
  - CV - IV characteristics (Capacitance-voltage and Current-voltage characteristics)
  - DLTS (Deep level transient spectroscopy)
  - MCTS (Minority Carrier Transient Spectroscopy)
- Sample preparation
  - chemical cleaning and HF-etching
  - electrical contact formation by thermal evaporation or sputtering, (e-beam evaporation)

Publications

- 33 (Hirsch-index ≈ 9)

Journal articles

[1] **F. C. Beyer**, C. G. Hemmingsson, S. Leone, Y.-C. Lin, A. Gällström, A. Henry, and E. Janzén. Deep levels in iron doped n- and p-type 4H-SiC. *J. Appl. Phys.*, 110:123701, 2011.

[2] **F. C. Beyer**, C. Hemmingsson, H. Pedersen, A. Henry, J. Isoya, N. Morishita, T. Ohshima, and E. Janzén. Annealing behavior of the EB-centers and M-center in low-energy electron irradiated n-type 4H-SiC. *J. Appl. Phys.*, 109:103703, 2011.

[3] **F. C. Beyer**, C. G. Hemmingsson, A. Gällström, S. Leone, H. Pedersen, A. Henry, and E. Janzén. Deep levels in tungsten doped n-type 3C-SiC. *Appl. Phys. Lett.*, 98:152104, 2011.

[4] S. Leone, **F. C. Beyer**, H. Pedersen, S. Andersson, A. Henry, O. Kordina, and E. Janzén. Chlorinated precursors study in low-temperature CVD of 4H-SiC. *Thin Solid Films*, 519:3074–3080, 2011.

[5] **F. C. Beyer**, C. G. Hemmingsson, H. Pedersen, A. Henry, J. Isoya, N. Morishita, T. Ohshima, and E. Janzén. Capacitance transient study of a bistable deep level in e^- -irradiated n-type 4H–SiC. *J. Phys. D: Appl. Phys.*, 45:455301, 2012.

[6] Ian D. Booker, Jawad Ul Hassan, Louise Lilja, **F. C. Beyer**, Robin Karhu, J. Peder Bergman, Örjan Danielsson, Olof Kordina, Einar Ö. Sveinbjörnsson, and Erik Janzén. Carrier Lifetime Controlling Defects $Z_{1/2}$ and RB1 in Standard and Chlorinated Chemistry Grown 4H-SiC. *Crystal Growth & Design*, 14(8):4104–4110, Aug 2014.

[7] Patrick Hofmann, Christian Röder, Frank Habel, Gunnar Leibiger, **F. C. Beyer**, Günter Gärtner, Stefan Eichler, and Thomas Mikolajick. Silicon doping of HVPE GaN bulk-crystals avoiding tensile strain generation. *J. Phys. D: Appl. Phys.*, 49(7):075502, 2016.

Reference

Prof. Johannes Heitmann,
(head of *Institute of Applied Physics*)
TU Bergakademie Freiberg
D-09599 Freiberg, Germany

E-mail: johannes.heitmann@physik.tu-freiberg.de
Phone: +49 3731 39 2590

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