

Publications of Prof. Dr.-Ing. Michael Schröter

1. Books (Monographies)

- [1] M. Schröter and A. Chakravorty, “Compact hierarchical modeling of bipolar transistors with HICUM”, World Scientific, Singapore, 2010. ISBN 978-981-4273-21-3, (<http://www.worldscientific.com/catalogues/asset.pdf>)

2. Books (edited)

- [1] N. Rinaldi and M. Schröter (eds.), “Silicon-Germanium Heterojunction Bipolar Transistors for Mm-wave Systems Technology, Modeling and Circuit Applications”, River Publishing, The Netherlands, 2018.

3. Book Chapters (invited)

- [1] M. Schröter and B. Ardouin, “The HiCuM bipolar transistor model”, Chapter 8 in G. Goldenblat (ed.), Compact Modeling: Principles, Techniques and Applications, Springer, 2010.
- [2] M. Schröter, “Advanced compact bipolar transistor models - HICUM”, Chapter 8.4 (pp. 807- 823) in “The silicon heterostructure handbook”, ed. by J. Cressler, CRC Press NY, 2005.
- [3] M. Schröter, “Integral Charge-Control Relations” Chapter A3 (pp. 1181-1208) in “The silicon heterostructure handbook”, ed. by J. Cressler, CRC Press NY, 2005.
- [4] M. Schröter, “Junction Diodes and Bipolar Junction Transistors”, Chapter 2 (pp. 139-152) in “The Electrical Engineering Handbook”, ed. Wai-Kai Chen, Academic Press/Elsevier Science, 2003.

4 Refereed journal and conference papers ([258])

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- [1] M. Hartmann, J. Tittmann-Otto, S. Böttger, G. Heldt, M. Claus, S. Schulz, M. Schröter, S. Hermann, "Gate Spacer Investigation for Improving the Speed of HF Carbon Nanotube-based Field-Effect Transistors", *ACS Applied Materials & Interfaces*, acc.
- [2] R. Salvato, V. d'Alessandro and M. Schröter, "Lateral charge partitioning across the internal base resistance for modeling distributed dynamic lateral effects in SiGe HBTs during large-signal switching", *Techn. Dig. EuroSimE, Cracow, Poland, March 27-29, 2020*.
- [3] Y. Zhang, W. Liang, X. Jin, M. Krattenmacher, S. Falk, P. Sakalas, B. Heinemann, and M. Schröter, "3.2mW 173-207 GHz Ultra-Low-Power Amplifier with 130 nm SiGe HBTs Operating in Saturation", *J. Solid-State Circ.*, Vol. 55, No. 6, pp. 1471-1481, 2020. [10.1109/JSSC.2019.2959510](#)
- [4] J. Ramos-Silva, A. Pacheco-Sanchez, L. Diaz-Albarran, L. Rodriguez-Mendez, M. Enciso-Aguilar, M. Schröter, E. Ramirez-Garcia, "High-frequency performance study of CNTFET-based amplifiers", *IEEE Trans. Nanotechnol.*, vol. 19, no. 1, pp. 284-291, 2020. [10.1109/TNANO.2020.2978816](#)

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- [5] P. Sakalas, A. Mukherjee, M. Schröter, "Distortion analysis of CE and CB SiGe HBT power cells with f_{max} beyond 220 GHz for millimeter-wave applications", *IEEE BCICTS Tech. Dig.*, Nashville (TN), 4p., 2019.
- [6] M. Schröter and M. Krattenmacher, "Mathematical foundation for constructing accurate dynamic bipolar transistor compact models", *IEEE BCICTS Tech. Dig.*, Nashville (TN), 4p., 2019.
- [7] A. Omar, W. Liang, A. Mukherjee, P. Sakalas, Y. Zhang, M. Schröter, "82 GHz direct up-converter mixer using double-balanced Gilbert cell with sensitivity analysis at mm-wave frequency", *IEEE BCICTS Tech. Dig.*, Nashville (TN), 4p., 2019.
- [8] S. Kolodinski, B. Peng, C. Esposito, Y. Zimmermann, M. Schröter, et al., "IPCEI subcontracts contributing to 22-FDX add-on functionalities at GF", *ESSDERC*, pp. 74-77, 2019.
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- [10] G. Darbandy, S. Mothes, M. Schröter, A. Kloes, M. Claus, "Performance Analysis of Parallel Array of Nanowires and a Nanosheet in SG, DG and GAA FETs", *Solid-State Electron.*, 162, 107641, 2019.
- [11] A. Mukherjee, W. Liang, P. Sakalas, J. Krause, A. Pawlak, K. Aufinger, M. Schröter, "W-band low-power millimeter-wave direct down converter using SiGe HBTs in saturation region", *IEEE ICM5G Conf.*, Atlanta, 4p., 2019.
- [12] P. Sakalas, A. Mukherjee, M. Schröter, "Noise and Linearity of High-Speed SiGe HBT Cells in CE and CB Operation", *ICNF*, Neuchatel, Switzerland, 2019.
- [13] Y. Zhang, W. Liang, P. Sakalas, A. Mukherjee, X. Jin, J. Krause, and M. Schröter, "12 mW 97 GHz Low-Power Down-Conversion Mixer with 0.7 V Supply Voltage", *IEEE Microw. and Wireless Comp. Lett.*, Vol. 29, No. 4, pp. 279-281, 2019. [10.1109/LMWC.2019.2901410](#)
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- [18] M. Schroter and M. Krattenmacher, "Modeling distributed dynamic lateral large-signal switching effects in bipolar transistors", *Proc. SiRF*, 4p., Anaheim Jan. 2019.

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