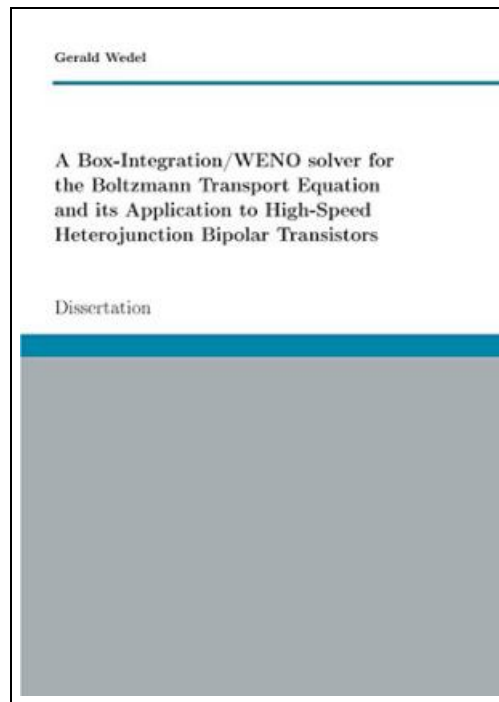


A Box-Integration/WENO solver for the Boltzmann Transport Equation its Application to High-Speed Heterojunction Bipolar Transistors



Filesize: 4.12 MB

Reviews

If you need to adding benefit, a must buy book. It is packed with wisdom and knowledge I am just effortlessly could get a pleasure of reading a written publication.

(Lea Legros V)

A BOX-INTEGRATION/WENO SOLVER FOR THE BOLTZMANN TRANSPORT EQUATION ITS APPLICATION TO HIGH-SPEED HETEROJUNCTION BIPOLAR TRANSISTORS

DOWNLOAD



To read **A Box-Integration/WENO solver for the Boltzmann Transport Equation its Application to High-Speed Heterojunction Bipolar Transistors** PDF, please click the link listed below and save the ebook or get access to additional information which are have conjunction with A BOX-INTEGRATION/WENO SOLVER FOR THE BOLTZMANN TRANSPORT EQUATION ITS APPLICATION TO HIGH-SPEED HETEROJUNCTION BIPOLAR TRANSISTORS book.

Books On Demand Jul 2017, 2017. Taschenbuch. Condition: Neu. Neuware - The ongoing trend for high-frequency (HF) applications drives the development of high-speed devices. Therefore, trustworthy device simulations are inevitable for understanding and designing future HF devices. During the last decade, the predictive capabilities of Drift-Diffusion (DD) and Hydrodynamic (HD) transport models turned out to be insufficient for state-of-the-art high-frequency transistors. Consequently, a more physics based transport model helps to counter these issues and thus, the Boltzmann transport equation (BTE) comes into focus. In this thesis, a deterministic solution method for the BTE is pursued. First, physical fundamentals and mathematical preconsiderations for the treatment of the BTE are reviewed. This covers the calculation of band structures/dispersion relations, an overview of scattering mechanisms and a detailed description of the coordinate transformations required for analyzing prominent semiconducting materials, such as Silicon-Germanium and III-V compounds, like Indium-Phosphide. The second part focuses on the numerical treatment of the BTE. Besides the employed normalization strategy, the discretization of the BULK BTE is described in detail. Based on the latter, the extensions for the device BTE are specified. A method for the direct calculation of stationary BTE solutions - for the BULK and device case - is introduced and an overview of the WENO method is outlined. The third part is dedicated to the applications of the deterministic solution method and simulation results of the BTE. Recipes for calculating the most important quantities, like current/electron densities, are given. Simulation results for the BULK case and for hetero-junction bipolar transistors are presented and analyzed. Here, the focus is put on both Silicon/Silicon-Germanium and Indium-Phosphide/Indium-Gallium-Arsenide material systems. The part is concluded by a critical review on the current field of application. A summary and an outlook on future extensions concludes the thesis. Besides pointing out the achievements of this...



[Read A Box-Integration/WENO solver for the Boltzmann Transport Equation its Application to High-Speed Heterojunction Bipolar Transistors Online](#)



[Download PDF A Box-Integration/WENO solver for the Boltzmann Transport Equation its Application to High-Speed Heterojunction Bipolar Transistors](#)



[Download ePub A Box-Integration/WENO solver for the Boltzmann Transport Equation its Application to High-Speed Heterojunction Bipolar Transistors](#)

Other eBooks



[PDF] Social Studies for the Preschool/Primary Child

Click the web link below to download "Social Studies for the Preschool/Primary Child" document.

[Read Document »](#)



[PDF] Studyguide for Social Studies for the Preschool/Primary Child by Carol Seefeldt ISBN: 9780137152841

Click the web link below to download "Studyguide for Social Studies for the Preschool/Primary Child by Carol Seefeldt ISBN: 9780137152841" document.

[Read Document »](#)



[PDF] Christmas Favourite Stories: Stories + Jokes + Colouring Book: Christmas Stories for Kids (Bedtime Stories for Ages 4-8): Books for Kids: Fun Christmas Stories, Jokes for Kids, Children Books, Books for Kids, Free Stories (Christmas Books for Children) (P

Click the web link below to download "Christmas Favourite Stories: Stories + Jokes + Colouring Book: Christmas Stories for Kids (Bedtime Stories for Ages 4-8): Books for Kids: Fun Christmas Stories, Jokes for Kids, Children Books, Books for Kids, Free Stories (Christmas Books for Children) (P" document.

[Read Document »](#)



[PDF] Children s Educational Book: Junior Leonardo Da Vinci: An Introduction to the Art, Science and Inventions of This Great Genius. Age 7 8 9 10 Year-Olds. [Us English]

Click the web link below to download "Children s Educational Book: Junior Leonardo Da Vinci: An Introduction to the Art, Science and Inventions of This Great Genius. Age 7 8 9 10 Year-Olds. [Us English]" document.

[Read Document »](#)



[PDF] Children s Educational Book Junior Leonardo Da Vinci : An Introduction to the Art, Science and Inventions of This Great Genius Age 7 8 9 10 Year-Olds. [British English]

Click the web link below to download "Children s Educational Book Junior Leonardo Da Vinci : An Introduction to the Art, Science and Inventions of This Great Genius Age 7 8 9 10 Year-Olds. [British English]" document.

[Read Document »](#)



[PDF] Serenade for Winds, Op. 44 / B. 77: Study Score

Click the web link below to download "Serenade for Winds, Op. 44 / B. 77: Study Score" document.

[Read Document »](#)



[PDF] The L Digital Library of genuine books(Chinese Edition)

Click the link listed below to download "The L Digital Library of genuine books(Chinese Edition)" document.

[Read eBook »](#)



[PDF] The Adventures of Sheriff Williker: /Book 1: The Case of the Missing Horseshoe

Click the link listed below to download "The Adventures of Sheriff Williker: /Book 1: The Case of the Missing Horseshoe" document.

[Read eBook »](#)



[PDF] Cello Concerto, Op. 104 / B. 191: Study Score

Click the link listed below to download "Cello Concerto, Op. 104 / B. 191: Study Score" document.

[Read eBook »](#)



[PDF] Baby Songs and Lullabies for Beginning Guitar Book/online audio(String Letter Publishing) (Acoustic Guitar) (Private Lessons)

Click the link listed below to download "Baby Songs and Lullabies for Beginning Guitar Book/online audio(String Letter Publishing) (Acoustic Guitar) (Private Lessons)" document.

[Read eBook »](#)



[PDF] Owl Notebook: Owl Gifts / Presents [Small Ruled Writing Journals / Notebooks with Mom Baby Owls]

Click the link listed below to download "Owl Notebook: Owl Gifts / Presents [Small Ruled Writing Journals / Notebooks with Mom Baby Owls]" document.

[Read eBook »](#)



[PDF] Some of My Best Friends Are Books : Guiding Gifted Readers from Preschool to High School

Click the link listed below to download "Some of My Best Friends Are Books : Guiding Gifted Readers from Preschool to High School" document.

[Read eBook »](#)