

Physics Highlights

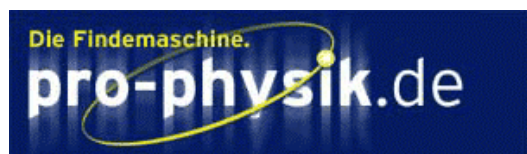
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Physics Highlights is intended to give you an overview of recent activities of the Wiley-VCH physics group. For further information, please visit our website www.wiley-vch.de or write to physics@wiley-vch.de.

pss special issue: "Heart"ware concepts for quantum computing

Algorithms based on quantum logic represent an exciting prospect for the development of advanced and even more powerful computers. The purpose of a recently held WE-Heraeus-Seminar was to provide a forum for the presentation of hardware concepts for the realisation of quantum computing with solid-state devices. Of particular interest were semiconductors, superconductors, magnetic thin films or molecular systems. Theoretical approaches, state-of-the-art results of experimental realisation as well as technological issues were discussed. The proceedings, guest-edited by M. S. Brandt, M. Fanciulli, and M. Stutzmann, have been published in the October issue of *phys. stat. sol. (b)* **233**, No. 3 (2002). The picture shows an image of a heart-shaped Josephson junction, designed to generate a double-well potential for a vortex qubit (taken from the paper by A. Kemp et al., p. 472).



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See Wiley-VCH at the MRS Fall Meeting in Boston

We shall be pleased to welcome you at the forthcoming Fall Meeting of the Materials Research Society (MRS) where we will present our recent publications and our new journal *physica status solidi (c) - conferences*. We also cordially invite you to the reception that will be held in the Independence Ballroom East of the Sheraton Hotel on Tuesday, December 3, 6:30pm - 8:30pm.
Visit Wiley-VCH at booth #102!

Materials Research Society Fall Meeting
Sheraton Hotel Boston, December 2-6, 2002
More information can be found at
<http://www.mrs.org/meetings/fall2002/program/>.



Recently published

Haferkorn, Heinz

Optik

Physikalisch-Technische Grundlagen und Anwendungen

The fourth, updated edition of this well-established handbook on optics has been expanded by more than 100 new pages and 80 new illustrations. The book serves as both textbook and reference work. The topics Radiation and Lighting Techniques, Imaging and Non-Imaging Optical Elements and Optical Instruments and Systems have been revised and combined into one concise chapter. This well-tried concept will appeal to polytechnic and university students as well as professionals.

2002. 750 pages. German. Hardcover. ISBN 3-527-40372-8. € 79,-

Bornholdt, Stefan / Schuster, Heinz Georg (eds.)

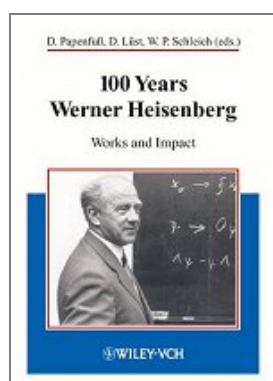
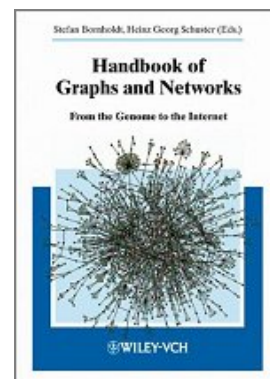
Handbook of Graphs and Networks

From the Genome to the Internet

This book defines the field of complex interacting networks in its infancy and presents the dynamics of networks and their structure as a key concept across disciplines. The contributions present common underlying principles of network dynamics and their theoretical description and are of interest to specialists as well as to the non-specialized reader looking for an introduction to this new exciting field.

Theoretical concepts include modeling networks as dynamical systems with numerical methods and new graph theoretical approaches, but also focus on networks that change their topology as in morphogenesis and self-organization. The authors offer concepts to model network structures and dynamics, focusing on approaches applicable across disciplines.

2002. 401 pages. Hardcover. ISBN . € 99,-



Papenfuß, Dietrich / Lüst, Dieter / Schleich, Wolfgang P. (eds.)

100 Years Werner Heisenberg: Works and Impact

Over 40 renowned scientists from all around the world discuss the work and influence of Werner Heisenberg, one of the premiere physicists of the 20th century who along with Einstein is responsible for shaping modern physics. The papers result from the symposium held by the Alexander von Humboldt-Stiftung on the occasion of the 100th anniversary of Heisenberg's birth.

2002. 299 pages. Hardcover. ISBN 3-527-40392-2. € 119,-

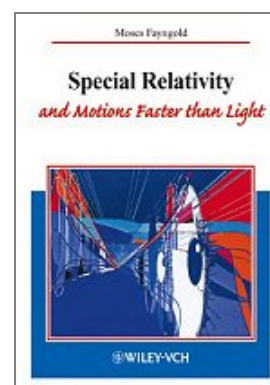
Fayngold, Moses

Special Relativity and Motions Faster than Light

Since first being formulated by Albert Einstein, the theory of special relativity has fascinated scientists, science fiction writers, futurists, and crackpots. Moses Fayngold brings together a self-consistent collection of topics in special relativity. Among other things, he includes recent experiments demonstrating superluminal propagation of light pulses.

The author tackles these topics both conceptually, with minimal or no mathematics, and quantitatively, making use of numerous illustrations to clarify the discussion. The result is a joy to read for both scientists familiar with the subject and laypeople wishing to understand something of special relativity.

2002. 310 pages. Hardcover. ISBN 3-527-40344-2. € 42,90



With kind regards,

Alexander Grossmann

Dr. Alexander Grossmann
Publisher