# Die Suche nach wissenschaftlicher Information in der Physik - nicht nur über GOOGLE

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# Die Suche nach wissenschaftlicher Information in der Physik - nicht nur über GOOGLE

- Motivation
- Suchstrategie
- Vergleich verschiedener Suchen
- Volltexte
- Zusammenfassung

# Suchstrategie

- Wonach suche ich?

  Namen, Begriffe, spezielle Artikel, Reviews

- Wo suche ich? (Kosten, Verfügbarkeit)

  (Meta-)Suchmaschinen, Datenbanken, Portale,

  Volltextserver (Verlage, Preprintserver)

- Wie suche ich? (Welche Hilfsmittel gibt es?)

  Freitext, Schlagwortindex, Klassifikation

# Die Suche nach wissenschaftlicher Information in der Physik - nicht nur über GOOGLE

(Meta-)Suchmaschinen, Datenbanken, Portale,Volltextserver (Verlage, Preprintserver)

**Quellen:**

- Seminararbeiten,
- Magister-, Diplom- sowie Doktorarbeiten,
- Bücher,
- Zusammenfassungen und Artikel, die aus Quellen wie akademischen Verlagen, Berufsverbänden, Magazinen für Vorabdrucke, Universitäten und anderen Bildungseinrichtungen stammen.

**Wie werden die Artikel gewichtet?**

Google Scholar ordnet Ihre Suchergebnisse nach Relevanz an. So wie bei der Webseitensuche mit Google werden die nützlichsten Verweise oben auf der Seite angezeigt. Die Ranking-Technologie von Google berücksichtigt den vollständigen Text eines Artikels, den Autor, wo der Artikel veröffentlicht wurde und wie oft der Text in der wissenschaftlichen Literatur zitiert wurde.

Virtuelle
Fachbibliothek
Physik

# ViFaPhys

Ein Angebot der TIB

## Fachinformationsführer

Kommentierte Sammlung ausgewählter und von Experten evaluierter Informationsquellen für Physiker. Erstellt unter Mitwirkung der Arbeitsgruppe Information der Deutschen Physikalischen Gesellschaft.

## GetInfo

Parallele Recherche in führenden Fachdatenbanken, Verlagsangeboten und Bibliothekskatalogen mit integrierter Volltextlieferung.

## Datenbanken

Zusammenstellung bibliographischer Datenbanken für die Physik.

## Über die ViFaPhys

Das Angebot, Tipps, Interna.
Die ViFaPhys finden Sie auch in **physikportale.net**, dem Wegweiser zu Physikportalen und ihren Diensten.

## TIB

Die Technische Informationsbibliothek TIB ist die Deutsche Zentrale Fachbibliothek für Technik sowie Architektur, Chemie, Informatik, Mathematik und **Physik**.

## Anregungen!

Sie vermissen Inhalte in der ViFaPhys, die für Physiker interessant sein könnten? Lassen Sie es uns hier wissen!





Gefördert durch die DFG Partner des Portals vascoda

GetInfo
FACHINFORMATIONEN FÜR TECHNIK UND NATURWISSENSCHAFTEN

TIB TECHNISCHE INFORMATIONSBIBLIOTHEK
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GetInfo - Vorsprung, der Wissen schafft
- Schnelle Suchmaschinentechnologie
- Navigierende Suche
- Datenbankübergreifendes Trefferranking
- Integrierte Volltextlieferung

Kontakt English

## Gesamtsuche

Fachübergreifend suchen in ausgewählten Datenbanken technisch-naturwissenschaftlicher Fächer.

**GetInfo** [ ] Erweiterte Suche Datenbankauswahl
*Beispiel:* (gear* OR Getriebe*) AND Hain
Suche starten Suchmaske leeren

## Fachsuche

Architektur | Chemie | Informatik | Mathematik | Physik | Technik

In ausgewählten fachspezifischen Datenbanken suchen.

**Physik** [ ] Erweiterte Suche Datenbankauswahl
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## TIB-Katalogsuche

Suche in den Beständen der TIB, der weltweit größten Fachbibliothek für Technik und Naturwissenschaften.

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SCIRUS
for scientific information only

http://www.scirus.com/

SCIRUS is the most comprehensive scientific research tool on the web. With over 370 million scientific items indexed at last count, it allows researchers to search for not only journal content but also scientists' homepages, courseware, pre-print server material, patents and institutional repository and website information.

(Info Elsevier)

- **Inspec** wertet fast 5000 Fachzeitschriften, Konferenz- und Forschungsberichte, Monographien und Dissertationen aus und bietet ca. 11 Millionen **bibliographische Hinweise** (mit **Abstracts**) auf die internationale Fachliteratur. Alle Daten sind mit einer einheitlichen Klassifikation erschlossen. INSPEC wird vom Institute of Engineering and Technology (IET) produziert.

- Fachgebiete: Physik, Elektrotechnik, Elektronik, Computer- und Informationstechnik, Maschinenbau, Produktion und Fertigungstechnik und verwandte Fachgebiete wie biomedizinesche Physik, Ozeanographie und Materialwissenschaften.

- Zeitliche Abdeckung **1969 - heute, Online Archiv zurück bis 1898.**

- Zugang über verschiedene Anbieter wie FIZ Karlsruhe (STN International), FIZ Technik, Wolters Klüwer Ovid

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**Timespan:**

(•) All Years (updated 2010-03-13)

( ) From 1945-1954 to 2009 (default is all years)

**Citation Databases:**

[x] Science Citation Index Expanded (SCI-EXPANDED)--1945-present
[ ] Social Sciences Citation Index (SSCI)--1956-present
[ ] Arts & Humanities Citation Index (A&HCI)--1975-present
[x] *NEW!* Conference Proceedings Citation Index- Science (CPCI-S)--1990-present
[ ] *NEW!* Conference Proceedings Citation Index- Social Science & Humanities (CPCI-SSH)--1990-present

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Subject search and browse: Physics Search Form Interface Catchup

5 Mar 2010: New Submission System and announcement schedule changes
21 Jan 2010: Collaborative support plan announced
8 Apr 2009: Added public author identifiers, Facebook interaction, `myarticles` widget, and personal Atom feeds
See cumulative "What's New" pages
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## Physics

- Astrophysics (**astro-ph** new, recent, find)
  includes: Cosmology and Extragalactic Astrophysics; Earth and Planetary Astrophysics; Galaxy Astrophysics; High Energy Astrophysical Phenomena; Instrumentation and Methods for Astrophysics; Solar and Stellar Astrophysics
- Condensed Matter (**cond-mat** new, recent, find)
  includes: Disordered Systems and Neural Networks; Materials Science; Mesoscale and Nanoscale Physics; Other Condensed Matter; Quantum Gases; Soft Condensed Matter; Statistical Mechanics; Strongly Correlated Electrons; Superconductivity
- General Relativity and Quantum Cosmology (**gr-qc** new, recent, find)
- High Energy Physics - Experiment (**hep-ex** new, recent, find)
- High Energy Physics - Lattice (**hep-lat** new, recent, find)
- High Energy Physics - Phenomenology (**hep-ph** new, recent, find)
- High Energy Physics - Theory (**hep-th** new, recent, find)
- Mathematical Physics (**math-ph** new, recent, find)
- Nuclear Experiment (**nucl-ex** new, recent, find)
- Nuclear Theory (**nucl-th** new, recent, find)
- Physics (**physics** new, recent, find)
  includes: Accelerator Physics; Atmospheric and Oceanic Physics; Atomic Physics; Atomic and Molecular Clusters; Biological Physics; Chemical Physics; Classical Physics; Computational Physics; Data Analysis, Statistics and Probability; Fluid Dynamics; General Physics; Geophysics; History of Physics; Instrumentation and Detectors; Medical Physics; Optics; Physics Education; Physics and Society; Plasma Physics; Popular Physics; Space Physics
- Quantum Physics (**quant-ph** new, recent, find)

## Mathematics

- Mathematics (**math** new, recent, find)
  includes (see detailed description): Algebraic Geometry; Algebraic Topology; Analysis of PDEs; Category Theory; Classical Analysis and ODEs; Combinatorics; Commutative Algebra; Complex Variables; Differential Geometry; Dynamical Systems; Functional Analysis; General Mathematics; General Topology; Geometric Topology; Group Theory; History and Overview; Information Theory; K-Theory and Homology; Logic; Mathematical Physics; Metric Geometry; Number Theory; Numerical Analysis; Operator Algebras; Optimization and Control; Probability; Quantum

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- High Energy Physics - Lattice (**hep-lat** new, recent, find)
- High Energy Physics - Phenomenology (**hep-ph** new, recent, find)
- High Energy Physics - Theory (**hep-th** new, recent, find)
- Mathematical Physics (**math-ph** new, recent, find)
- Nuclear Experiment (**nucl-ex** new, recent, find)
- Nuclear Theory (**nucl-th** new, recent, find)
- Physics (**physics** new, recent, find)
  includes: Accelerator Physics; Atmospheric and Oceanic Physics; Atomic Physics; Atomic and Molecular Clusters; Biological Physics; Chemical Physics; Classical Physics; Computational Physics; Data Analysis, Statistics and Probability; Fluid Dynamics; General Physics; Geophysics; History of Physics; Instrumentation and Detectors; Medical Physics; Optics; Physics Education; Physics and Society; Plasma Physics; Popular Physics; Space Physics
- Quantum Physics (**quant-ph** new, recent, find)

## Mathematics

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## Nonlinear Sciences

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# HEP Search

High-Energy Physics Literature Database

find t quark and a richter, burton and not date < 1984 :: More Examples

Default WWW Format | No Sort | Search

SEARCH HELP :: EASY SEARCH :: BROWSE :: ABOUT HEP

## Academic Jobs Online (24 Aug 2009)

Please see an open letter to the North American HEP Theory community concerning the new service Academic Jobs Online (AJO). SPIRES supports the use of this service, any jobs posted at AJO will automatically be added to HEPJobs.

**Senior job postings**

Tokyo U.: Physics and Mathemat... Tokyo U.: Physics and Mathemat... SLAC: Director: Stanford S... Colorado State U.: Physics Department C... More Senior Jobs Other Jobs

**Symmetry Breaking:New Articles**

Steven Chu's energy challenge [Fri Jun 26] Crews dig in at NOvA site [Fri Jun 26] A Higgs boson without the mess [Fri Jun 26] Dancing with science, or, a little light music [Thu Jun 25] Profile: Cervando Castro - steady hands and sharp eyes [Wed Jun 24] More Symmetry Breaking

**HEP**
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**SPIRES**
- TopCites
- HEP Reviews
- *symmetry breaking*
- Playground
- Biblio. Tools
- SPIRES Tools
- Preprint listing

**Resources**
- arXiv
- HEPDATA
- PDG

**DESY**
- Alternate SPIRES :
- SPIRES
- Books (ALEPH)
- Books (SPIRES)
- Weekly Listings

# HEP Reviews

**SPIRES' Guide to the Review Literature in HEP**

We are often asked, how do I find a review of a certain topic in high-energy physics? In this guide, we index by topic the review papers that have a significant number of citations in the SPIRES-HEP database. These papers include all of those with at least 100 citations by June 2004, but other papers are added as well. We update this listing annually.

Each paper appears in the one subject category that we find most appropriate. A general review of supersymmetry in particle physics might appear either in category Id1 or IIIc1, depending on its orientation.

It is possible to search more generally for review papers in SPIRES-HEP by using the search term `scl r'. For example, find a wilczek and scl r finds all review papers written by Frank Wilczek.

Please note that the selection of papers by citation count brings in many older references, some of which are classics but others of which may be out of date. We do not necessarily recommend the papers found with this tool, but we feel it is useful to bring them to your attention.

On the other hand, if there is an exceptionally useful review paper that is not included in this listing, please let us know. For example, many sets of summer school lecture notes are indispensible to students but are not often cited. (Also, before the creation of the eprint archive, SPIRES did not track the citations of lecture notes.) Please write to us at spires@slac.stanford.edu to nominate papers that should appear in this listing. No self-nominations, please.

This list is compiled and classified by Michael Peskin and Travis Brooks, SLAC.

The general headings are as follows:



- **I. Theoretical and Mathematical Physics** [Top of page]
  - Ia. Mathematics for Physics Applications
    - Ia1. Functional Analysis

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Books (SPIRES)
Weekly Listings

- IVf. Inflation
  - IVf1. General Reviews of Inflationary Cosmology
  - IVf2. Models of Inflation
- IVg. The Cosmological Constant Problem
  - IVg1. General Reviews of the Cosmological Constant Problems
  - IVg2. Models of the Cosmological Constant (or of its Absence)

- **V. Nuclear and High-Density Strong Interactions** [Top of page]
  - Va. Nuclear Structure and Reactions
    - Va1. Nuclear Structure
    - Va2. Nuclear matter
    - Va3. Nuclear Reactions
    - Va4. Parity Violation and Weak Interactions in Nuclei
  - Vb. QCD in Nuclear Physics
    - Vb1. QCD Descriptions of the Nuclear Force
    - Vb2. Exclusive QCD Reactions in Nuclei, Color Transparency
  - Vc. QCD at High Temperature and Density
    - Vc1. Computation of the Properties of QCD at High Temperature and Density
    - Vc2. Symmetry and Symmetry-Breaking in QCD at High Density
    - Vc3. Lattice Gauge Theory Studies of QCD Phase Transitions
    - Vc4. Strange Matter
  - Vd. Heavy-Ion Reactions
    - Vd1. Phenomenology of Heavy-Ion Reactions
    - Vd2. Signatures of Quark-Hadron Phase Transitions
- **VI. Accelerator Physics** [Top of page]
  - VIa. General Aspects of Accelerator Physics
    - VIa1. Classical Mechanics for Accelerator Physics
    - VIa2. Beam Transport Systems
    - VIa3. Polarized Sources and Targets
  - VIb. Linear Accelerators
    - VIb1. General Aspects of Linear Accelerators
    - VIb2. Free-Electron Lasers
    - VIb3. Advanced Acceleration Concepts
  - VIc. Synchrotrons
    - VIc1. Accelerator Physics of Synchrotrons
    - VIc2. Hadron Colliders
    - VIc3. Electron Colliders
    - VIc4. Muon Colliders
    - VIc5. Polarized Beams in Synchrotrons
  - VId. Linear e+e- Colliders
    - VId1. Design of Linear Colliders
    - VId2. Interaction-Region Physics of Linear Colliders
  - VIe. Instrumentation and Control of Particle Accelerators
    - VIe1. Magnet Design
    - VIe2. Beam Monitoring and Feedback

# Hilfsmittel

## Schlagwortindex, Klassifikation

## Schlagwortindex:

Ein Index kann zur beschleunigten Suche verwendet werden.
Beispiel:

Der INSPEC-Thesaurus ist ein strukturiertes Schlagwortverzeichnis für die INSPEC-Datenbank und ein wichtiges Werkzeug zur Verbesserung der Suche. Der Thesaurus wird zur Indexierung (Verschlagwortung) der Datenbank INSPEC eingesetzt.
Damit steht zusätzlich zu den Freitextinformationen im Titel oder in der Inhaltsangabe ein kontrollierter und strukturierter Wortschatz für eine qualifizierte Suche zur Verfügung.

# Klassifikation Nach PACS:

AIP | Physics and Astronomy Classification Scheme® (PACS®)

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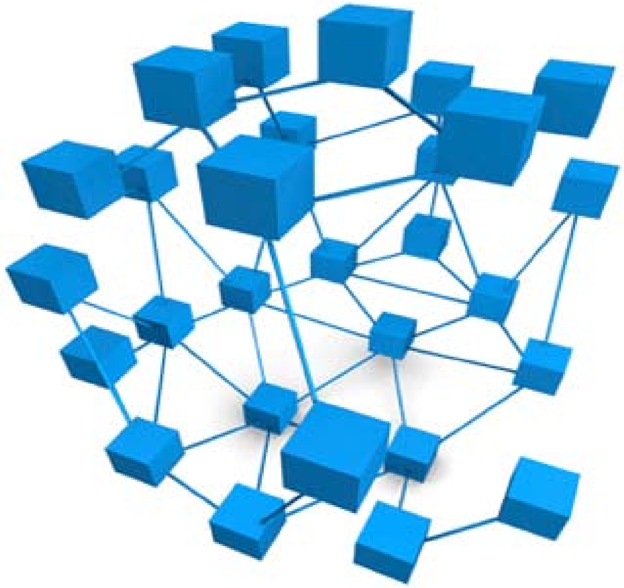
## An essential tool for classification of literature in the physical sciences

*Physics and Astronomy Classification Scheme®* (*PACS®*) is an internationally adopted, hierarchical subject classification scheme, designed by the American Institute of Physics (AIP) to classify and categorize the literature of physics and astronomy.



### Learn more about *PACS*:

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Revised editions of *PACS* are published biennially, or as necessary, by AIP. The latest edition of *PACS* is the 2010 edition. Papers published in AIP Journals in 2010 and onward will be assigned *PACS* codes from this edition. AIP gratefully acknowledges the assistance and cooperation of the AIP Subcommittee on Classification and Information Retrieval—consisting of appointed members representing a broad spectrum of scientific disciplines—which holds oversight responsibility for *PACS* development, including this latest edition.

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- **Alphabetical Index to *PACS 2010***

Complementing your search for appropriate codes, you may wish to browse *PACS* to view the codes as they appear within the scheme's hierarchy. Below are links to all ten sections of *PACS 2010*, along with its two appendices and supplement. Within each section, new codes appear highlighted in green:

- **00**—General
- **10**—The Physics of Elementary Particles and Fields
- **20**—Nuclear Physics
- **30**—Atomic and Molecular Physics
- **40**—Electromagnetism, Optics, Acoustics, Heat Transfer, Classical Mechanics, and Fluid Dynamics
- **50**—Physics of Gases, Plasmas, and Electric Discharges
- **60**—Condensed Matter: Structural, Mechanical and Thermal Properties
- **70**—Condensed Matter: Electronic Structure, Electrical, Magnetic, and Optical Properties
- **80**—Interdisciplinary Physics and Related Areas of Science and Technology
- **90**—Geophysics, Astronomy, and Astrophysics

- **Appendix to 43**—Acoustics
- **Appendix to 91-94 and 96**—Geophysics
- **Supplement**—Nanoscale Science & Technology Terms

Long-time users of *PACS* may wish to explore the detailed changes between the prior edition—*PACS 2008*—and the current edition. For this purpose, AIP has produced a Special Edition of *PACS 2010*, which indicates new, modified, and deleted codes, and provides mapping instructions for transforming deleted *PACS 2008* codes into the new 2010 codes. Follow the link below to the Special Edition of *PACS 2010*:

- ***PACS 2010* Special Edition**

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- **20**—Nuclear Physics
- **30**—Atomic and Molecular Physics
- **40**—Electromagnetism, Optics, Acoustics, Heat Transfer, Classical Mechanics, and Fluid Dynamics
- **50**—Physics of Gases, Plasmas, and Electric Discharges
- **60**—Condensed Matter: Structural, Mechanical and Thermal Properties
- **70**—Condensed Matter: Electronic Structure, Electrical, Magnetic, and Optical Properties

  71. Electronic structure of bulk materials
  72. Electronic transport in condensed matter
  73. Electronic structure and electrical properties of surfaces, interfaces, thin films, and low-dimensional structures
  74. Superconductivity
  75. Magnetic properties and materials
  76. Magnetic resonances and relaxations in condensed matter, Mössbauer effect
  77. Dielectrics, piezoelectrics, and ferroelectrics and their properties
  78. Optical properties, condensed-matter spectroscopy and other interactions of radiation and particles with condensed matter
  79. Electron and ion emission by liquids and solids; impact phenomena

- **80**—Interdisciplinary Physics and Related Areas of Science and Technology
- **90**—Geophysics, Astronomy, and Astrophysics

## 73. **Electronic structure and electrical properties of surfaces, interfaces, thin films, and low-dimensional structures** *(for electronic structure and electrical properties of superconducting films and low-dimensional structures, see 74.78.-w; for computational methodology for electronic structure calculations in condensed matter, see 71.15.-m)*

**73.20.-r Electron states at surfaces and interfaces**

73.20.At Surface states, band structure, electron density of states

73.20.Fz Weak or Anderson localization

73.20.Hb Impurity and defect levels; energy states of adsorbed species

73.20.Jc Delocalization processes

73.20.Mf Collective excitations (including excitons, polarons, plasmons and other charge-density excitations) *(for collective excitations in quantum Hall effects, see 73.43.Lp)*

73.20.Qt Electron solids

**73.21.-b Electron states and collective excitations in multilayers, quantum wells, mesoscopic, and nanoscale systems** *(for electron states in nanoscale materials, see 73.22.-f)*

73.21.Ac Multilayers

73.21.Cd Superlattices

73.21.Fg Quantum wells

73.21.Hb Quantum wires

# Suchbeispiele

Google

domain wall* AND dynamic* Suche Erweiterte Suche Einstellungen

Suche: ◉ Das Web ○ Seiten auf Deutsch ○ Seiten aus Deutschland

**Web** Ergebnisse **1** - **10** von ungefähr **2.650.000** für **domain wall* AND dynamic***. (**0,38** Sekunden)



Tipp: Suchen nur nach Ergebnissen auf **Deutsch**. Sie können Ihre bevorzugten Spracheinstellungen in Einstellungen angeben.

KOPS - Zugang zum Dokument - **Domain Wall Dynamics in** Magnetic **...**
Freie Schlagwörter (Englisch): magnetic **domain wall** , spin transfer torque , spin **dynamics** , **spin** rectification. DDC-Sachgruppe: Physik **...**
kops.ub.uni-konstanz.de/volltexte/2008/5017/ - 38k - Im Cache - Ähnliche Seiten

**Dynamic distortion** in a magnetic **domain wall** containg loosely **...** - [ Diese Seite übersetzen ]
The **dynamics of** a magnetic **domain wall** containing 27r vertical Bloch lines (27rVBL) lias been investigated using numerical methods. The **wall** is the kind **...**
ieeexplore.ieee.org/iel3/5091/13885/00642274.pdf - Ähnliche Seiten
von A Bagneres - 1993 - Ähnliche Artikel

**Dynamic Domains** in Strongly Driven Ferromagnetic Films - tuprints
The features of the **dynamic domain** solution far from the **domain wall** are discussed and it is seen that **dynamic domains** merge into one another as the **...**
tuprints.ulb.tu-darmstadt.de/302/ - 37k - Im Cache - Ähnliche Seiten
von K Mayes - 2003 - Zitiert durch: 1 - Ähnliche Artikel - Alle 7 Versionen

Influence of **Domain Wall** Pinning on the **Dynamic Behavior** of **...** - [ Diese Seite übersetzen ]
27 Aug 2008 **...** However, these magnetic structures often contain numerous imperfections such as **domain wall** pinning sites, which have to be taken into **...**
www.als.lbl.gov/als/science/sci_archive/172vortices.html - 16k - Im Cache - Ähnliche Seiten

**Dynamics of** field-driven **domain-wall** propagation in ferromagnetic **...** - [ Diese Seite übersetzen ]
However, the **domain-wall dynamics in** nanowires has only been investigated8 **...** We present spatially resolved dynamic measurements of **domain**-wall propagation **...**
www.nature.com/nmat/journal/v4/n10/full/nmat1477.html - Ähnliche Seiten
von GSD Beach - 2005 - Zitiert durch: 66 - Ähnliche Artikel

Demagnetization field of **domain wall: statics and dynamics Dmitry ...** - [ Diese Seite übersetzen ]
influence of dynamic demagnetization field on **domain wall dynamics.** On the base of Slonczewski's equations numerical integration it is used two models for **...**
asdn.net/ngcm2004/raw_abstracts/040416125939/abstract.pdf - Ähnliche Seiten

Magnetic **Domain Wall Dynamics Associated** with the Dynamic Phase **...** - [ Diese Seite übersetzen ]
Progress of Theoretical Physics Supplement No. 161, 2006. 181. Magnetic **Domain Wall Dynamics Associated** with the Dynamic Phase Transition. Naoya Fujiwara, **...**
jpsj.ipap.jp/link?PTPS/161/181/ - Ähnliche Seiten
von N Fujiwara - Ähnliche Artikel - Alle 7 Versionen

Journal of Magnetism and Magnetic Materials : **Domain wall dynamics ...** - [ Diese Seite übersetzen ]
One-dimensional (1D) **domain wall** (DW) **dynamics was** one of the very first topics in **dynamic micromagnetics**. In 1956, Walker derived a 1D analytic solution **...**
linkinghub.elsevier.com/retrieve/pii/S0304885301013531 - Ähnliche Seiten
von A Thiaville - 2002 - Zitiert durch: 22 - Ähnliche Artikel - Alle 5 Versionen

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domain wall* AND dynamic* [Suche]

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**Dynamic** dilatonic **domain** walls - arxiv.org [PDF]
HA Chamblin, HS Reall - Arxiv preprint hep-th/9903225, 1999 - arxiv.org
... **Dynamic** Dilatonic **Domain** Walls ... Motivated by the "universe as a brane" idea, we investigate the motion of a (D−2)-brane (or **domain wall**) that couples to ...
Zitiert durch: 319 - Ähnliche Artikel - HTML-Version - Websuche - Alle 5 Versionen

The **dynamic** behavior of **domain** walls in barium titanate
EA Little - Experientia Phys Rev, 1947 - APS
... 10). For an optical study of the **dynamic** behavior of 180 ... of about 1 g width at the **wall** does not ... rectangular pulses were applied to a single-**domain** [101] crystal ...
Zitiert durch: 104 - Ähnliche Artikel - Websuche - Bibliothekssuche - Alle 6 Versionen

**Dynamic** generalization of the scalar Preisach model of hysteresis
G Bertotti - IEEE Transactions on Magnetics, 1992 - ieeexplore.ieee.org
... **domain wall** dynamics [51, so that the model becomes a valuable tool by which it is possible to introduce magnetic **domain** effects into **dynamic** hysteresis loop ...
Zitiert durch: 99 - Ähnliche Artikel - Websuche - Alle 5 Versionen

[BUCH] Magnetic **domain** walls in bubble materials
AP Malozemoff, JC Slonczewski - 1979 - Academic press
Zitiert durch: 250 - Ähnliche Artikel - Websuche - Bibliothekssuche

**Domain-wall dynamic** transitions in thin films
SW Yuan, H NEAL BERTRAM - Physical review. B, Condensed matter, 1991 - cat.inist.fr
**Domain-wall dynamic** transitions in thin films. SW YUAN, H NEAL BERTRAM Physical review. B, Condensed matter 44:2222, 12395-12405, American ...
Zitiert durch: 26 - Ähnliche Artikel - Websuche - Alle 4 Versionen

**Domain** walls in strongly coupled theories - arxiv.org [PDF]
G Dvali, M Shifman - Physics Letters B, 1997 - Elsevier
... The peculiar features of the **domain wall** discussed above ... trapping massless gauge bosons inside the **wall**. ... the context of the **dynamic** compactification scenarios ...
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Non-BPS D 8-branes and **dynamic domain** walls in massive IIA supergravities - arxiv.org [PDF]
HA Chamblin, MJ Perry, HS Reall - Journal of High Energy Physics, 1999 - iop.org
... The gravitational effects of a **domain wall** are described by the Israel equations ... Section 5 describes **dynamic** branes of a different massive IIA supergravity and ...
Zitiert durch: 48 - Ähnliche Artikel - Websuche - Alle 7 Versionen

... effect in coarse and fine grain barium titanate ceramics on **dynamic** and static pressure
M Demartin, D Damjanovic - Applied Physics Letters, 1996 - link.aip.org
... response of fine and coarse grain ceramics under static and **dynamic** forces ... The goal of this letter is to get new information on the **domain wall** contribution to ...
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**Zahn, Markus**, Dec 2008
...Gauss's law, 82-83 relating curl over volume to surface integral, 44 relating gradient over volume to sur- face integral, 43 **Domains**, ferroelectric, 50 ferromagnetic, 356-357 Dominant waveguide mode, 640 Doppler frequency shifts, 507-508 Dot (scalar) product...
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...ferromagnetic. Estimate the energy cost of a single **domain wall** in a chain of length L. You may assume that the transition...phases. (c) Show that the energy of a dilute set of **domain walls** located at positions {xi} is given by |xi – xj...
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**Chan, Timothy**, *dissertation*, Jul 2008
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**Zhang, Hongquan / [illegible]** , Jan 2009
Brittle fracture, high failure rate, lack of adhesion to dentine and caries- protective properties hinder their wider use in large stress-bearing restorations.
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7. Structural Investigations of Complex Glasses by Solid-state NMR
**Leonova, Ekaterina** , Jan 2009
...that are dispersed on the pore **wall**. PRINT Publisher: Stockholm...structural model, in which the pore **walls** of MBGs are composed of a silica...are dis- persed on the pore **wall**. vi vii List of papers I...Transition DOR Double Rotation DAS **Dynamic** Angle Spinning EFG Electric...
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**Demidov, Vladislav E. / Jersch, Johann / Demokritov, Sergej O. / Rott, Karsten / Krzysteczko, Patryk / Reiss, Guenter** , *Physical Review B*, 79 (5), Feb 2009
doi:10.1103/PhysRevB.79.054417

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**Undulator** – Wikipedia
20. März 2009 ... Ein **Undulator** (**to** undulate = sich schlängeln, wellenförmig bewegen) oder Wiggler (englisch: to wiggle = wackeln) ist ein technisches Gerät ...
de.wikipedia.org/wiki/**Undulator** - 24k - Im Cache - Ähnliche Seiten

**Undulator** (**populär**) - Forschungszentrum Dresden-Rossendorf, FZD
Ein **Undulator ist** ein Gerät, welches einen Elektronenstrahl veranlasst, anstatt geradeaus zu fliegen, sich wie eine Schlange im Gras zu bewegen. ...
www.fzd.de/db/Cms?pOid=10335 - 12k - Im Cache - Ähnliche Seiten

**Undulator - Wikipedia**, the free encyclopedia - [ Diese Seite übersetzen ]
An **undulator is** an insertion device from high-energy physics and usually part of a larger installation, a synchrotron storage ring. ...
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[PDF] Precision Measurement of the **Undulator K** Parameter - [ Diese Seite übersetzen ]
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31 Aug 2006 ... The LCLS **Undulator consists** of 33, essentially identical, independent **undulator segments**. ... **undulator segments**, and scan K of one segment ...
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Lexikon: **Undulator [DESYs** KworkQuark]
Aufbau und Funktionsweise Ein **Undulator besteht** aus einer Folge von Magneten, die in abwechselnder Nord-Süd-Ausrichtung hintereinander geschaltet sind. ...
www.physik.unizh.ch/lectures/MC2009/cd/exercises/kworkquark/de/lexikon/lexikon.**undulator**/1/index.html - 12k - Im Cache - Ähnliche Seiten

Der erste **Undulator-Prototyp** für PETRA III wurde geliefert
9. März 2007 ... März wurde der erste der drei **Undulator Prototypen** für PETRA III nach einer Lieferzeit von ca. 12 Monaten auf dem DESY-Gelände angeliefert. ...
petra3.desy.de/neuigkeiten/allgemeines/der_erste_**undulator**_ist_da/index_ger.html - 27k - Im Cache - Ähnliche Seiten

Unulator Abi Lk 2004
Im **Undulator erfahren** die Elektronen eine Zentripetalbeschleunigung. Beschleunigte Ladungen emittieren immer elektromagnetische Strahlung. ...
leifi.physik.uni-muenchen.de/web_ph12/musteraufgaben/02beweg_gel_teil/**undulator**_lk_04/**undulator**_l.htm - 5k - Im Cache - Ähnliche Seiten

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First experimental results from IBM/TENN/TULANE/LLNL/LBL **undulator** beamline at the advanced light ...
JJ Jia, TA Callcott, J Yurkas, AW Ellis, FJ ... - Review of Scientific Instruments, 1995 - link.aip.org
The IBM/TENN/TULANE/LLNL/LBL Beamline 8.0 at the advanced light source combining
a 5.0 cm, 89 period **undulator** with a high-throughput, high-resolution **...**
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Analysis of Figure-8-**Undulator** Radiation
T Tanaka, H Kitamura - Journal of Synchrotron Radiation, 1996 - dx.doi.org
**...** research papers. Volume 3 Part 2 Pages 47-52 March 1996 Analysis of Figure-8-**Undulator**
Radiation. **...** (1996). 3, 47-52. Analysis of Figure-8-**Undulator** Radiation. **...**
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... of a very high resolution soft x-ray beamline BL25SU with a twin-helical **undulator** at Spring-8
Y Saitoh, H Kimura, Y Suzuki, T Nakatani, T ... - Review of Scientific Instruments, 2000 - link.aip.org
We report on the excellent performance of a newly constructed soft x-ray helical
**undulator** beamline BL25SU of SPring-8 for photon energies 500–1800 eV. **...**
Zitiert durch: 83 - Ähnliche Artikel - Websuche - Alle 2 Versionen

Generation of coherent radiation by a relativistic-electron beam in an **undulator**
M Kondratenko, EL Saldin - Sov. Phys. Dokl, 1979 - adsabs.harvard.edu
Title: Generation of coherent radiation by a relativistic-electron beam in an
**undulator**. Authors: Kondratenko, AM; Saldin, EL. Publication **...**
Zitiert durch: 124 - Ähnliche Artikel - Websuche

In-vacuum undulators of SPring-8 - ▶ bnl.gov [PDF]
T Hara, T Tanaka, T Tanabe, XM Marechal, S Okada, ... - Journal of Synchrotron Radiation, 1998 - dx.doi.org
**...** The standard-type SPring-8 in-vacuum **undulator** has a period of 32 mm and a minimum
gap of 8 mm. **...** Each 4.5 m-long **undulator** consists of three 1.5 m segments. **...**
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Performance of a high resolution, high flux density SGM **undulator** beamline at the ALS (invited)
T Warwick, P Heimann, D Mossessian, W McKinney, H ... - Review of Scientific Instruments, 1995 - link.aip.org
This is an integrated system for delivering radiation from a 5 cm period **undulator**
to spectroscopy and microscopy experiments across the range of photon **...**
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Analyses for a planar variably-polarizing **undulator**
S Sasaki - Nuclear Instruments and Methods in Physics Research Section ..., 1994 - adsabs.harvard.edu
Title: Analyses for a planar variably-polarizing **undulator**. Authors: Sasaki,
Shigemi. Affiliation: Department of Synchrotron Radiation **...**
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[PDF] ▶ Permanent magnet undulators
K Halbach - J. de Physique: Colloque, 1983 - hal.inria.fr
**...** Fig. 1 shows schematically a pure REC **undulator**. **...** c, and L = 112, equ. ( 1 ) becomes
An early **undulator** of this design has been described in some detail in ref. **...**
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X-ray **undulator** beamline BW1 at DORIS III
R Frahm, J Weigelt, G Meyer, G Materlik - Review of Scientific Instruments, 1995 - link.aip.org
The BW1 x-ray **undulator** beamline at HASYLAB offers high intensity for
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This resource contains information about the origin of species–that mystery of mysteries, as it has been called by one of our greatest philosophers.
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**Peng, Jifeng / Dabiri, John O.**, *article*, Aug 2008
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**Lindgren, J. / Alwmark, C. / Caldwell, M. W. / Fiorillo, A. R.** , *Biology Letters*, Apr 2009
doi:10.1098/rsbl.2009.0097
...selection pressures as both the earlier ichthyosaurs and later whales, had achieved a streamlined body form for optimized axial-**undulatory** locomotion. A high level of aquatic adaptation is further corroborated by the presence of longitudinally arranged rows of...
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**Reid, Daniel A. P. / Hildenbrandt, H. / Padding, J. T. / Hemelrijk, C. K.** , *Physical Review E*, 79 (4), Apr 2009
doi:10.1103/PhysRevE.79.046313
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**Macek, J. H. / Sternberg, J. B. / Ovchinnikov, S. Y. / Lee, Teck-Ghee / Schultz, D. R.** , *Physical Review Letters*, 102 (14), Apr 2009
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This dissertation addresses three research challenges in planar lightwave circuit (PLC) optical signal processing. 1. Dynamic localization, a relatively new class of quantum phenomena, has not been demonstrated in any system to date. To address this ...

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Conference Information: General Assembly of the International-Association-of-Geodesy/24th General Assembly of the Interntional-Union-of-Geodesy-and-Geophysics, JUL 02-13, 2007 Perugia, ITALY
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6. Title: Universal function for the brilliance of undulator radiation considering the energy spread effect
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# Rotational and vibrational spectra of quantum rings

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**NORDITA, Blegdamsvej 17, 2100 Copenhagen, Denmark*

**One can confine the two-dimensional electron gas in semiconductor heterostructures electrostatically or by etching techniques such that a small electron island is formed. These man-made "artificial atoms" provide the experimental realization of a text-book example of many-particle physics: a finite number of quantum particles in a trap. Much effort was spent on making such "quantum dots" smaller and going from the mesoscopic to the quantum regime [1,2]. Far-reaching analogies to the physics of atoms, nuclei or metal clusters were obvious from the very beginning: The concepts of shell structure and Hund's rules were found [1] to apply – just as in real atoms! In this Letter, we report the discovery that electrons confined in ring-shaped quantum dots form rather rigid molecules with antiferromagnetic order in the ground state. This can be seen best from an analysis of the rotational and vibrational excitations.**

While the independent-particle picture was successful in describing the electronic structure for rather large particle densities, for more dilute systems or in stronger magnetic fields correlation effects are of crucial importance. Configuration-interaction (CI) calculations, which have a long tradition in quantum chemistry and cluster physics, were then much used [3]. Although these so-called "exact" calculations are numerically demanding and limited to the smallest sizes, they still are able to provide significant insight into the many-body phenomena that occur in these finite fermion systems with reduced dimensionality. In this Letter we apply CI techniques to investigate the electronic structure of *quantum rings* that contain up to seven electrons. Usually the confinement of small, two-dimensional quantum dots is to a very good approximation harmonic. Correspondingly, we model quantum rings as they are realized in the laboratory by a potential of the form $V(r) = \frac{1}{2}m^*\omega_0^2(r-r_0)^2$. For moderate confinement this potential corresponds to an harmonic dot with its center removed. Ground and excited states of $N$ electrons trapped in the potential $V(r)$ are determined from numerical diagonalization as a function of the total angular momentum. Surprisingly, at electron densities and strengths of the ring confinement where one should expect electron *liquid* behavior, a model which assumes *localization* of the electrons in the ring is successful in analyzing the many-body spectra. Group-theoretical methods familiar from molecular physics provide the necessary tools to uncover rotational and vibrational structures in the spectra. The spin sequence and energies of the low-lying states for given angular momentum can be understood from the symmetry associated with the electronic ground state configuration. It is intriguing that the success of the simple rigid-rotor model for the low-lying states is *not* limited to a regime where the system becomes very one-dimensional. The fact that the electrons behave as if they were localized in the ring is also reflected in a remarkable agreement of the CI results with the Hubbard or Heisenberg model. Localization at large electron densities has earlier been discussed in parabolic quantum dots, where the interpretation is not yet conclusive [4]. We write for the Hamiltonian

$$H = \sum_{i=1}^{N}\left[-\frac{\hbar^2}{2m^*}\nabla_i^2 + V(r_i)\right] + \sum_{i<j}^{N}\frac{e^2}{4\pi\varepsilon_0\varepsilon}\frac{1}{\mid \mathbf{r}_i - \mathbf{r}_j\mid}\ , \qquad (1)$$

where $m^*$ and $\varepsilon$ are the effective mass and the dielectric constant of the corresponding semiconductor material. The parameters that determine the properties of the quantum ring are the number of electrons $N$, the radius of the ring $r_0$ and the strength $w_0$ of the harmonic confinement in the radial direction. The quantities $r_0$ and $\omega_0$ are related to the more fundamental quantities $r_s$, the one-dimensional density parameter which describes the particle density $n = 1/(2r_s)$ along the ring (thus $r_0 = Nr_s/\pi$) and $C_F$, a dimensionless parameter that measures the degree of one-dimensionality. $C_F$ essentially describes the excitation energy of the next radial mode $\hbar\omega_0$, which is defined to be $C_F$ times the (1D) Fermi energy. We thus obtain $\hbar\omega_0 = C_F\hbar^2\pi^2/(32m^*r_s^2)$ . The higher the value of $C_F$, the more the radial modes are frozen in their ground states. Thus, the ring is narrower for larger $C_F$. For the CI calculation, the spatial single-particle states of the Fock space are chosen to be eigenstates of the single-particle part of the Hamiltonian $H$. We expand them in the harmonic oscillator basis. According to their eigenenergies, from 30 to about 50 lowest single-particle states are selected to span the Fock space. Typically this means that for lower angular momentum states several radial quantum numbers $n = 0,1,2,3$ are included, whereas the higher angular momentum states $l = \pm 6,\ldots,\pm 10$ have only $n = 0$. To set up the Fock states for diagonalization, we sample over the full space with a fixed number of spin down and spin up electrons, $N_\downarrow + N_\uparrow = N$ . From this sampling, only those states with a given total orbital angular momentum and a configuration energy (corresponding to the sum of occupied single-particle energies) less than the specified cutoff energy $e_c$ are selected. The purpose was to choose only the most important Fock states from the full basis and hereby reducing the matrix dimension to a size $d \lesssim 2\cdot 10^5$. To obtain all the eigenstates with different total spin, we have to set $N_\downarrow = N_\uparrow = N/2$ for even particle numbers ($S_z = 0$, all states with different total spin have this component), and analogously $N_\downarrow = N_\uparrow \pm 1$ for odd numbers. Once the active Fock states have been specified, the Hamiltonian matrix is calculated. For diagonalization we use the Arpack library [6] suitable for large, sparse matrices. Finally, the total spin of each eigenvector is determined

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