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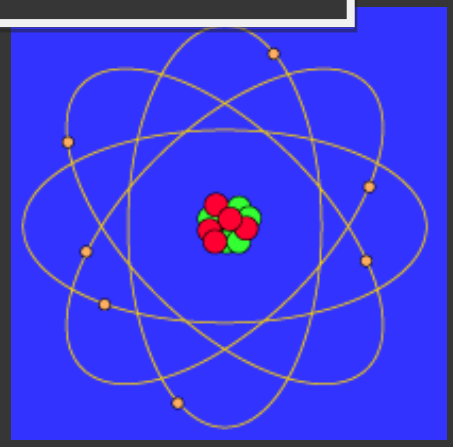
*Bohr modelo*aren mendeurrena
Centenario del *modelo de Bohr*



eman ta zabal zazu

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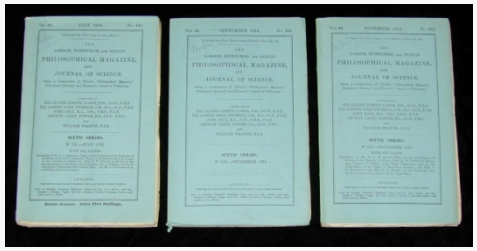
Niels Bohr
(1885-1962)

El 6 de julio de 1913, el joven físico danés **Niels Bohr** publica en el Philosophical Magazine la primera parte de las tres en que dividió su estudio *On the constitution of atoms and molecules*, en el que desarrolla una nueva teoría sobre la estructura del átomo y la constitución de la materia.



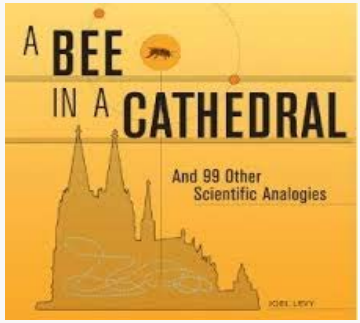
El "modelo de Bohr" le valió el premio Nobel de física en 1922 y constituyó el arranque de la física cuántica.
Aunque en 1925 nuevas investigaciones dieron un vuelco a su principal postulado, sus ideas básicas sobre el estado estacionario y los saltos cuánticos han sobrevivido en la moderna mecánica cuántica.

Su influencia se reconoce en el desarrollo de actuales tecnologías de uso diario, como el microondas, los lectores laser de DVD, o las técnicas de análisis de sustancias.

Tampoco hay que olvidar su faceta de pensador, sobre todo en lo referente a la metafísica del conocimiento.

Si te interesa esta "historia" ►►►►ADÉNDRATE EN LA BIBLIOTECA.

☺POR CIERTO, HABLANDO DE ÁTOMOS,
¿qué se mueve como una abeja dentro de una catedral?



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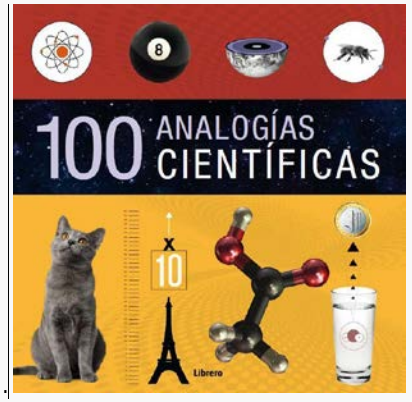


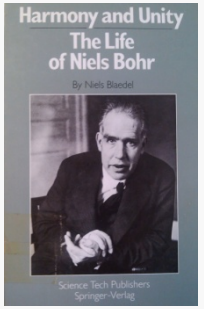
100 analogías científicas / Joel Levy.
Librero : Kerkdriel, Holanda, 2012.
ISBN 9789089982056

Sbc - Aprendizaje A-001 CIE

http://encore.ehu.es/iii/encore/record/C__Rb1736728

Un excelente prontuario de comparaciones cotidianas, lógicas intuitivas y grafismo visual con el que aprender la ciencia que se esconde tras el mundo de lo increíblemente grande (lo molar), lo inimaginablemente pequeño (lo molecular) y lo inescrutablemente complejo (lo cuántico).

▸▸GURE LIBURUTEGIAN: SELECCIÓN DE LIBROS

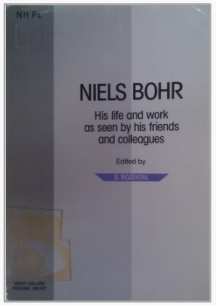


Harmony and unity : the life of Niels Bohr / By Niels Blaedel
Science Tech, Springer-Verlag, Madison, Wisconsin : Berlin [etc.] : 1988
ISBN 0910239142

Bbc - Investigación 53 BOHR BLA
Sbc - Investigación 53 BOHR BLA

http://encore.ehu.es/iii/encore/record/C__Rb1005292

This book, skillfully interweaving Bohr's scientific and personal life, is the first biography to be based on the extensive archives of the Bohr Institute of Physics in Copenhagen, and on excerpts from many of Bohr's letters to his family, his friends, and his colleagues. In addition, the book includes more than 150 photographs, as well as extracts from Bohr's personal correspondence to his wife, Margrethe, dating from the time of their engagement to just before his death 50 years later. This work of scientific biography is accessible to both the scientist and the general reader. Skillfully translated from the original Danish by Geoffrey French, the book has been carefully edited for an English-speaking readership.

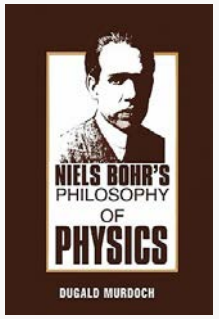


Niels Bohr : his life and work as seen by his friends and colleagues / edited by S. Rozental
North Holland, New York : c1967-1985.
ISBN 0444869778

Bbc- Investigación 53 BOHR NIE

http://encore.ehu.es/iii/encore/record/C__Rb1044421

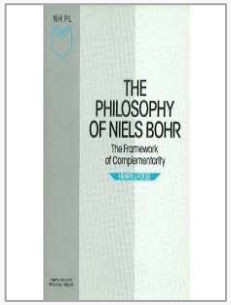
http://www.sciencemag.org/content/158/3803/899.full.pdf



Niels Bohr's philosophy of physics / Dugald Murdoch.
Cambridge University Press, Cambridge [etc.] : 1989
ISBN 052137927X

Bbc - Investigación 53 BOHR MUR
Sbc – Investigación 53.01
http://encore.ehu.es/iii/encore/record/C__Rb1042934

1. Murdoch describes the historical background of the physics from which Bohr's ideas grew; he traces the origins of his idea of complementarity and discusses its meaning and significance.



The philosophy of Niels Bohr : the framework of complementarity / Henry J. Folse
North Holland, Amsterdam [etc.] : 1985.
ISBN 0444869387

Bbc- Investigación 53.01 FOL

http://encore.ehu.es/iii/encore/record/C__Rb1005283

Of all the developments in twentieth century physics, none has given rise to more heated debates than the changes in our understanding of science precipitated by the ``quantum revolution''. In this revolution, Niels Bohr's dramatically non-classical theory of the atom proved to be the springboard from which the new atomic physics drew it's momentum. Furthermore, Bohr's contribution was crucial not only because his interpretation of quantum mechanics became the most widely accepted view but also because in his role as educator and spokesman for atomic physics Bohr was very much the patron spirit of the entire quantum revolution. The conceptual framework which he proposed to provide a new viewpoint for understanding the quantum theoretical description of atomic systems became for most of this century the dominant outlook of countless productive experimental and theoretical physicists. He called this new framework ``complementarity''.

La teoría atómica y la descripción de la naturaleza : cuatro ensayos precedidos de una introducción / Niels Bohr
Alianza, Madrid : 1988
ISBN 8420625256

Bbc- Investigación 539.1 BOH
Sbc - Investigación 530.145 BOH
Sbc-Aprendizaje A-530.145 BOH
Vbc Sala Font Quer 530.145 BOH

http://encore.ehu.es/iii/encore/record/C__Rb1233839

http://eltrasguprobabilista.wordpress.com/2007/07/31/la-teoria-atomica-y-la-descripcion-de-la-naturaleza-niels-bohr/

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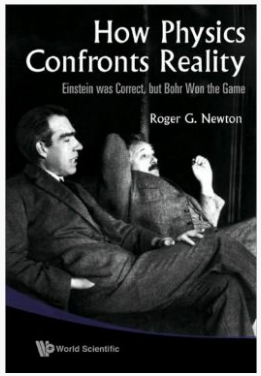
Nuevos ensayos sobre física atómica y conocimiento humano (1958-1962) / Niels Bohr
Aguilar, Madrid : D.L. 1970.

Bbc – Depósito 539.1 BOH

http://encore.ehu.es/iii/encore/record/C__Rb1583863

Siete ensayos escritos por Niels Bohr durante los cinco últimos años de su vida en los que llama la atención acerca de las enormes dificultades encontradas en la tenaz lucha para descifrar la estructura íntima de la materia.

AMPLIANDO EL CAMPO

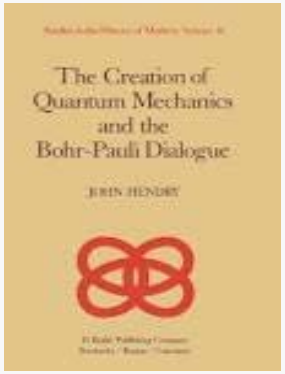


How physics confronts reality : Einstein was correct, but Bohr won the game /Roger G. Newton
World Scientific, Singapore [etc.]: cop. 2009
ISBN 9814277037

Bbc - Investigación 530.145 NEW

http://encore.ehu.es/iii/encore/record/C__Rb1590672

This book recalls, for nonscientific readers, the history of quantum mechanics, the main points of its interpretation, and Einstein's objections to it, together with the responses engendered by his arguments. We point out that most popular discussions on the strange aspects of quantum mechanics ignore the fundamental fact that Einstein was correct in his insistence that the theory does not directly describe reality. While that fact does not remove these counterintuitive features, it casts them in a different light.



The creation of quantum mechanics and the Bohr-Pauli dialogue / John Hendry
D. Reidel, Dordrecht, Holanda [etc.] : 1984.
ISBN 902771648X

Bbc - Investigación 530.145 HEN

http://encore.ehu.es/iii/encore/record/C__Rb1041090

The historian John Hendry gives a detailed account of the fierce struggles, during the first quarter of this century, by such eminent thinkers as Hilbert, Jordan, Weyl, von Neumann, Born, Einstein, Sommerfeld, Pauli, Heisenberg, Schroedinger, Dirac, Bohr and others, to come up with a rational way of comprehending the data from atomic experiments.

The historical development of quantum theory / Jagdish Mehra, Helmut Rechenberg
Springer-Verlag, New York [etc.] : 1982-?.
ISBN 0387906673

Bbc - Investigación 530.145 MEH
Sbc - Investigación 530.145 MEH
S DIPC 530.145 MEH

http://encore.ehu.es/iii/encore/record/C__Rb1045584
http://encore.ehu.es/iii/encore/record/C__Rb1061529

It is a definitive historical study of that scientific work and the human struggles that accompanied it from the beginning. Drawing upon such materials as the resources of the Archives for the History of Quantum Physics, the Niels Bohr Archives, and the archives and scientific correspondence of the principal quantum physicists, as well as Jagdish Mehra's personal discussions over many years with most of the architects of quantum theory, the authors have written a rigorous scientific history of quantum theory in a deeply human context. This multivolume work presents a rich account of an intellectual triumph: a unique analysis of the creative scientific process.

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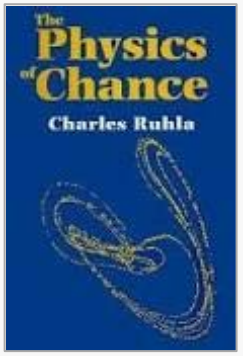
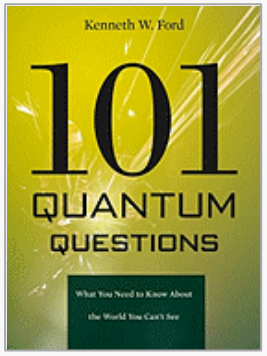


The physics of chance : from Blaise Pascal to Niels Bohr / Charles Ruhla
Oxford University Press, Oxford [etc.] : 1992
ISBN 0198539606

Bbc – Investigación 530.1 RUH
Sbc - Investigación 530.16

http://encore.ehu.es/iii/encore/record/C__Rb1031789

This work offers a clear, much-needed introduction to the ideas of randomness that are central to modern physics. The author shows how the laws of probability and statistics were developed by such mathematicians as Fermat, Pascal, and Gauss, and how they received their first major application in physics in the kinetic theory of gases developed by Maxwell and Boltzmann. The author skillfully guides the reader through these developments and provides mathematical details in appendices, offering an accessible introduction to the modern physicist's conception of the world of cause and chance



101 quantum questions : what you need to know about the world you can't see / Kenneth W. Ford.
Harvard University Press, Cambridge, Massachusetts [etc.] : 2011.
ISBN: 9780674050990

S DIPC 530.145 FOR

http://encore.ehu.es/iii/encore/record/C__Rb1744131

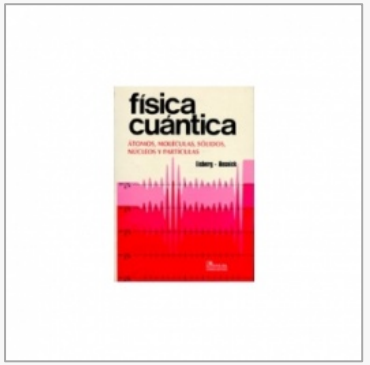
In this entertaining and comprehensive overview, Ford, former director of the American Institute of Physics, manages to encapsulate modern physics while illuminating rather than befuddling the lay reader. Starting with the introductory "What is the quantum, anyway?" and ending with the amusingly unanswerable "How come the quantum?" Ford explains the essential concepts of quantum reality, our small-fast world, full of uncertainty and probability, where all matter can exist in more than one state simultaneously. Ford brings interesting and entertaining anecdotal and historical material into his answers.

Alicia en el País de los Cuantos : una alegoría de la física cuántica / Robert Gilmore
Alianza Editorial, Madrid : 2011
ISBN: 9788420653433

Sbc – Investigación 530.145 ALI

http://encore.ehu.es/iii/encore/record/C__Rb1746647

Robert Gilmore consigue exponernos en esta obra de forma más clara y accesible los rasgos esenciales del mundo cuántico (e incluso aquellos algo más costosos de aprehender), proponiéndonos un insólito viaje para el cual sólo hace falta un poco de gusto por la aventura del pensamiento o una elemental curiosidad por el mundo que nos rodea.



Física cuántica : átomos, moléculas, sólidos, núcleos y partículas / Robert Eisberg y Robert Resnick
Limusa, México : cop. 2012.
ISBN: 9789681804190

Bbc – Aprendizaje 530.14 EIS

http://encore.ehu.es/iii/encore/record/C__Rb1757210

El objetivo de este libro de texto es presentar un estudio claro y válido de las propiedades de los sistemas cuánticos elementales. La sencillez se logra destacando más la importancia de las aplicaciones de la teoría que la teoría misma. De esta manera, se motiva a los estudiantes a ampliar sus conocimientos teóricos.

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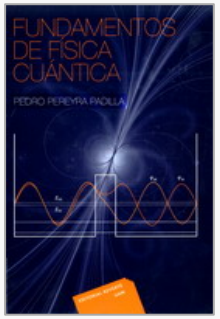
Del determinismo clásico al delirio cuántico o Mecánica clásica, relativista y cuántica / Luis García Pascual
Universidad Pontificia Comillas [etc.], Madrid : 2012.
ISBN: 9788484684268

Bbc - Investigación 530.145 GAR

http://encore.ehu.es/iii/encore/record/C__Rb1758686

García Pascual explicó que ha escrito el libro con la intención de que la teoría de la relatividad deje de ser algo misterioso para los no iniciados, porque "sentí la necesidad de que fuera lo más normal de la vida pasar de Newton a Einstein". A su juicio, hacía falta vulgarizar e intentar poner estos conceptos "a la altura del hombre de la calle".
A lo largo de los 17 capítulos del libro, García Pascual repasa la evolución de la física, de Galileo a Newton, de Newton a Einstein, de Einstein a Planck y de este en adelante, para después detenerse en aspectos más concretos como la velocidad de la luz, la relatividad, la cinemática, la doble naturaleza de la luz y la materia o la física cuántica.

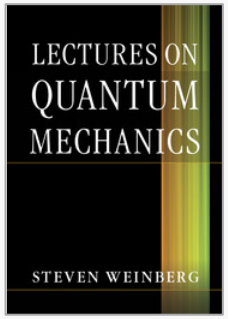


Fundamentos de física cuántica
Universidad Autónoma Metropolitana [etc.], México : 2011.
ISBN: 9786077815051

Bei - Ingenierías Técnicas 530.14 PER
Bit - Ingenieros 530.145 PER

http://encore.ehu.es/iii/encore/record/C__Rb1730734

En este libro se presentan los fundamentos de la física cuántica en un estilo claro y directo. Se revisan los problemas físicos que dieron origen a la teoría cuántica y se estudia, con sencillez y sin perder el rigor matemático y conceptual, el formalismo cuántico y sus aplicaciones en pozos y barreras, el oscilador armónico, el átomo de hidrógeno, la ecuación de Pauli, las partículas idénticas, etc., y los métodos semiclásico y perturbativo.

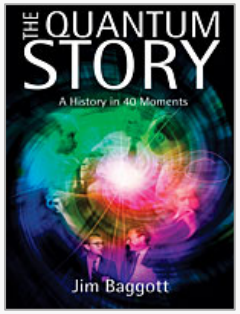


Lectures on quantum mechanics / Steven Weinberg
Cambridge University Press, Cambridge ; New York : 2012.
ISBN: 9781107028722
Bbc - Investigación 530.145 WEI
Bbc – Aprendizaje 530.145 WEI

http://encore.ehu.es/iii/encore/record/C__Rb1748949

Nobel Laureate Steven Weinberg combines his exceptional physical insight with his gift for clear exposition to provide a concise introduction to modern quantum mechanics. Ideally suited to a one-year graduate course, this textbook is also a useful reference for researchers. The textbook covers many topics not often found in other books on the subject, including alternatives to the Copenhagen interpretation, Bloch waves and band structure, the Wigner–Eckart theorem, magic numbers, isospin symmetry, the Dirac theory of constrained canonical systems, general scattering theory, the optical theorem, the 'in-in' formalism, the Berry phase, Landau levels, entanglement and quantum computing.

Entrevista a Steven Weinberg
Matthews, J.N.A.| Physicstoday, 8-7-13
http://www.physicstoday.org/daily_edition/bookends/questions_and_answers_with_steven_weinberg

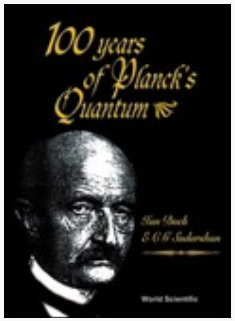


The quantum story : a history in 40 moments / Jim Baggott
Oxford University Press, Oxford [etc.] : 2011
ISBN: 9780199566846

S DIPC 53(09) BAG

http://encore.ehu.es/iii/encore/record/C__Rb1737003

In *The Quantum Story: A History in 40 Moments*, Jim Baggott achieves a balanced synthesis between both approaches while avoiding the above extremes. His primary goal is to explain, using historical and biographical vignettes, the contemporary state of quantum theory to nonspecialists who understand basic physics.

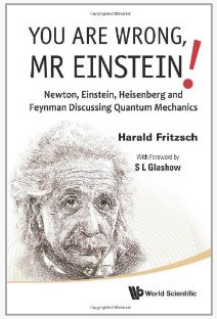


100 years of Planck's quantum / Jan Duck, E.C.G. Sudarshan
World Scientific, Singapore [etc.] : 2000
ISBN: 981024309X

Bbc - Investigación 530.145 DUC

http://encore.ehu.es/iii/encore/record/C__Rb1411805

This invaluable book takes the reader from Planck's discovery of the quantum in 1900 to the most recent interpretations and applications of nonrelativistic quantum mechanics. The introduction of the quantum idea leads off the prehistory of quantum mechanics, featuring Planck, Einstein, Bohr, Compton, and de Broglie's immortal contributions. The invention of matrix mechanics and quantum mechanics by Heisenberg, Born, Jordan, Dirac, and Schrödinger is presented next. Following that, are the Einstein–Bohr debates on the interpretation of quantum mechanics. Finally, the book presents a selection of the most dramatic modern developments, both theoretical and experimental: Feynman path integrals, the modern interpretation based on decoherence, quantum optics experiments leading to teleportation, DeWitt's wave function of the universe, and a brief introduction to the end-of-the-millennium prospects of quantum computation. A concluding chapter presents the authors' conjectures for the next 100 years of the quantum.

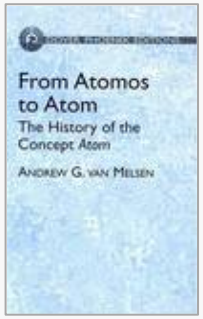


You are wrong, Mr. Einstein! : Newton, Einstein, Heisenberg, and Feynman discussing quantum mechanics / Harald Fritzsc
World Scientific, New Jersey [etc.] : 2011
ISBN: 9789814324991

S DIPC 530.1 FRI

http://encore.ehu.es/iii/encore/record/C__Rb1732105

Werner Heisenberg and Richard Feynman find quantum physics fascinating and necessary for understanding the atoms. Albert Einstein dislikes it and Isaac Newton does not understand it. Harald Fritzsch brings together Newton and the 3 great physicists of the 20th century in an imaginary meeting

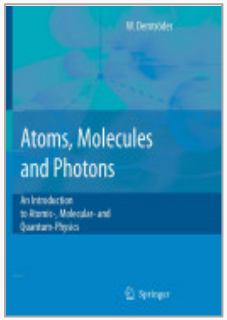


From atomos to atom : the history of the concept atom / Andrew G. van Melsen
Dover Publications, Inc., Mineola, New York : 2004
ISBN: 0486495841

S DIPC 539.1 MEL

http://encore.ehu.es/iii/encore/record/C__Rb1482675

Fascinating ...clear and authoritative.--Philosophy Widely acclaimed as an outstanding contribution to both science and philosophy, this classic profiles the atom from earliest to modern times. The first part is philosophic, chronicling the atom's progress from Grecian philosophy
through the pivotal age of the 17th century. The second part, which is primarily scientific in outlook, examines how the atom evolved into a physical concept and deals with the subsequent evolution of atomic theory into quantum theory. The final chapter addresses some of the philosophic questions arising from this historical survey, including the highly significant issue of whether there remains room for philosophy alongside physical science.

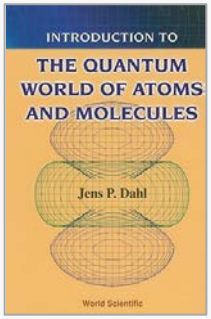


Atoms, molecules and photons : an introduction to atomic-, molecular- and quantum-physics / Wolfgang Demtröder
Springer, Berlin [etc.] : 2006.
ISBN: 3540206310

Bbc – Investigación 539.1 DEM
S DIPC 539.1 DEM

http://encore.ehu.es/iii/encore/record/C__Rb1488758

This introduction to Atomic and Molecular Physics explains how our present model of atoms and molecules has been developed over the last two centuries both by many experimental discoveries and, from the theoretical side, by the introduction of quantum physics to the adequate description of microparticles.

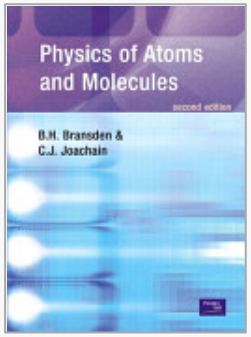


Introduction to the quantum world of atoms and molecules / Jens Peder Dahl.
World Scientific, Singapore [etc.] : 2001.
ISBN: 9810245653

Sbc – Investigación 539.1 DAH
S DIPC 539.1 DAH

http://encore.ehu.es/iii/encore/record/C__Rb1372386

The present book is based on lectures given for the past several years at the Technical University of Denmark. The present treatise is an introduction to the quantum-mechanical laws with a molecular angle of approach.



Physics of atoms and molecules / B.H. Bransden and C.J. Joachain
Prentice Hall, Englewood Cliffs, New Jersey : 2003
ISBN: 9780582356924

Sbc – Investigación 539.1 BRA
Bit – Ingenieros 539.1 BRA

http://encore.ehu.es/iii/encore/record/C__Rb1533762

The study of atomic and molecular physics is a key component of undergraduate courses in physics, because of its fundamental importance to the understanding of many aspects of modern physics. The aim of this new edition is to provide a unified account of the subject within an undergraduate framework, taking the opportunity to make improvements based on the teaching experience of users of the first edition, and cover important new developments in the subject.

The physics of atoms and quanta : introduction to experiments and theory / Hermann Haken, Hans Christoph Wolf.
Springer-Verlag, Berlin [etc.] : 2005
ISBN: 3540208070

Vbc - Sala Font Quer 539.1 HAK
S DIPC 539.1 HAK

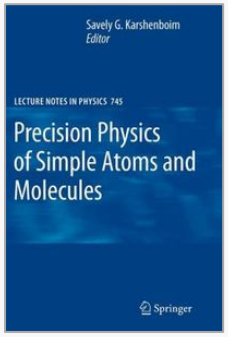
http://encore.ehu.es/iii/encore/record/C__Rb1475096

Springer-Verlag, Berlin [etc.] : 2000

Bbc –Aprendizaje 530.14 HAK

http://encore.ehu.es/iii/encore/record/C__Rb1350955

The Physics of Atoms and Quanta is a thorough introduction to experiments and theory in this field. Every classical and modern aspect is covered and discussed in detail.



Precision physics of simple atoms and molecules / S.G. Karshenboim [ed.].
Springer, Berlin [etc.] : 2008
ISBN: 9783540754787

S DIPC 539.1 PRE

http://encore.ehu.es/iii/encore/record/C__Rb1567185

This volume presents multidisciplinary treatments of important areas and new developments wthin precision physics. It concentrates on new topics, for example, on the proton structure and its effects on the energy levels , on simple molecules, on atoms somewhat more complicated than hydrogen, on exotic atoms and atoms with exotic nuclei.

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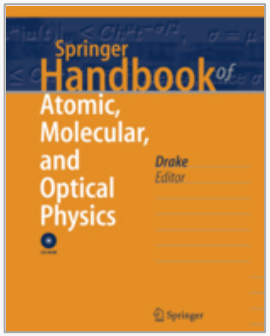


Springer handbook of atomic, molecular, and optical physics / Gordon W. F. Drake (ed.)
Springer, New York [etc.] : 2006
ISBN: 9780387208022

Bit Ingenieros 539.1 SPR

http://encore.ehu.es/iii/encore/record/C__Rb1520252

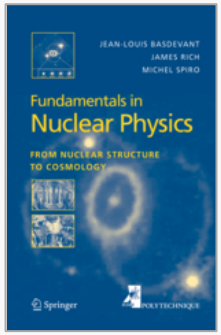
This Springer Handbook of Atomic, Molecular, and Optical Physics comprises a comprehensive reference source that unifies the entire fields of atomic, molecular, and optical (AMO) physics, assembling the principal ideas, techniques and results of the field from atomic spectroscopy to applications in comets. Its 92 chapters are written by over 100 authors, all leaders in their respective disciplines.

Física nuclear y de partículas / Antonio Ferrer Soria.
Universitat de València, València : 2003.
ISBN: 8437055431

Bbc – Investigación 539.1 FER
Bbc – Aprendizaje 539.1 FER

http://encore.ehu.es/iii/encore/record/C__Rb1411748

Física nuclear y de partículas aborda con rigor y claridad temas de física de actualidad como el estado de las investigaciones sobre núcleos, un estudio de la variedad de desintegraciones y reacciones nucleares y sus aplicaciones, además de los constituyentes más íntimos de la materia: quarks y leptones. Se dirige a los estudiantes de físicas, de ingenierías y otras licenciaturas afines. Además, científicos y tecnólogos encontrarán capítulos de gran interés en torno a las características de la radiación (alfa, beta o gamma), las propiedades de los aceleradores y detectores de partículas, los métodos de análisis de datos y los fundamentos de las reacciones de fisión y fusión nuclear.

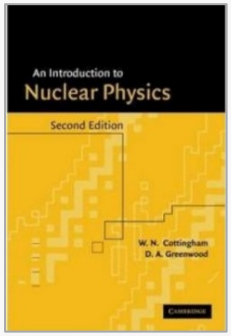


Fundamentals in nuclear physics : from nuclear structure to cosmology / Jean-Louis Basdevant, James Rich, Michel Spiro.
Springer, New York [etc.] : cop. 2005
ISBN: 9780387016726

Bbc – Investigación 539.1 BAS

http://encore.ehu.es/iii/encore/record/C__Rb1549654

This course, the authors delivered at the Ecole Polytechnique, explores nuclear physics and its applications ranging from the structure of nuclei and their reactions, to astrophysics and cosmology. The physics is introduced with arguments based on simple ideas such as the empirical structure of nuclear forces and its interplay with the Pauli principle and Coulomb repulsion. The book then develops elementary nuclear models and illustrates nuclear systematics with experimental data.



An introduction to nuclear physics / W.N. Cottingham, D.A. Greenwood
Cambridge University Press, New York : 2001.
ISBN: 0521657334

Bbc – Investigación 539.1 COT
Bbc – Aprendizaje 539.1 COT

http://encore.ehu.es/iii/encore/record/C__Rb1344264

This introduction to nuclear physics provides an excellent basis for a core undergraduate course in this area. The authors show how simple models can provide an understanding of the properties of nuclei, both in their ground and excited states, and of the nature of nuclear reactions.

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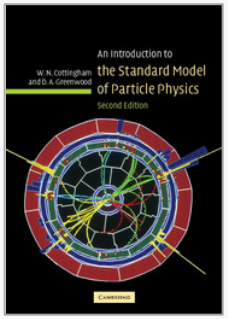
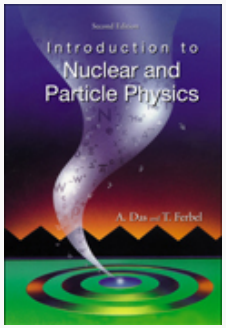


An introduction to the standard model of particle physics / W.N. Cottingham and D.A. Greenwood.
Cambridge University Press, Cambridge [etc.] : 2007
ISBN: 9780521852494

Bbc – Investigación 539.12 COT
Bbc – Aprendizaje 539.12 COT

http://encore.ehu.es/iii/encore/record/C__Rb1590646

The new edition of this introductory graduate textbook provides a concise but accessible introduction to the Standard Model. It has been updated to account for the successes of the theory of strong interactions, and the observations on matter-antimatter asymmetry.

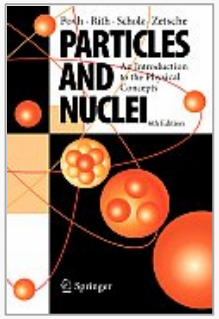


Introduction to nuclear and particle physics / A. Das and T. Ferbel.
Wold Scientific, New Jersey : 2003
ISBN: 9812387447

Bbc – Investigación 539.1 DAS

http://encore.ehu.es/iii/encore/record/C__Rb1447913

This second edition is , being less formal but well-written as first, a good vehicle for learning the more intuitive rather than formal aspects of the subject. It is therefore of value to scientists with a minimal background in quantum mechanics, but is sufficiently substantive to have been recommended for graduate students interested in Rutherford scattering, nuclear properties and structure, interactions of particles in matter, elementary-particle phenomena...

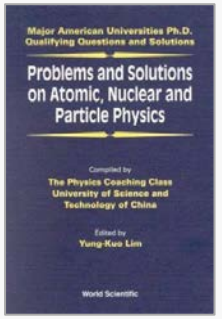


Particles and nuclei : an introduction to the physical conceps / Bogdan Povh... [et al.].
Springer, Berlin [etc.] : 2004.
ISBN: 3540201688

Bbc – Investigación 539.12 PAR
Bbc – Aprendizaje 539.12 PAR

http://encore.ehu.es/iii/encore/record/C__Rb1447903

This introductory textbook gives a uniform presentation of nuclear and particle physics. The first part, Analysis, is devoted to disentangling the substructure of matter. The second part, Synthesis, shows how the elementary particles may be combined to build hadrons and nuclei.

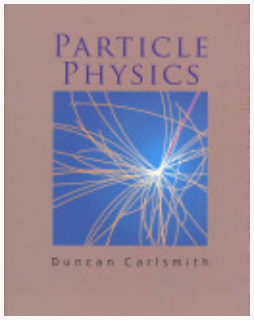


Problems and solutions on atomic, nuclear and particle physics / compiled by The Physics Coaching Class, University of Science and Technology of China ; edited by Lim Yung-kuo
World Scientific, Singapore [etc.] : 2000
ISBN: 9810239173

Bbc – Investigación 539.1 PRO
S DIPC 539.1(076.3) PRO

http://encore.ehu.es/iii/encore/record/C__Rb1378427

This book, part of the seven-volume series Major American Universities PhD Qualifying Questions and Solutions contains detailed solutions to 483 questions/problems on atomic, molecular, nuclear and particle physics, as well as experimental methodology. The problems are of a standard appropriate to advanced undergraduate and graduate syllabi, and blend together two objectives -- understanding of physical principles and practical application. The volume is an invaluable supplement to textbooks.



Particle physics / Duncan Carlsmith
Pearson, Boston [etc.] : 2013
ISBN: 9780321676894

Sala Font Quer 539.12 CAR

http://encore.ehu.es/iii/encore/record/C__Rb1750280

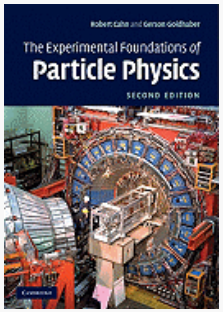
Particle Physics is the first book to connect theory and experiment in particle physics. Duncan Carlsmith provides the first accessible exposition of the standard model with sufficient mathematical depth to demystify the language of gauge theory and Feynman diagrams used by researchers in the field. Carlsmith also connects theories to past, present, and future experiments.

Elementary particle physics in a nutshell / Christopher G. Tully
Princeton University, Princeton, New Jersey : 2011
ISBN: 9780691131160

Bbc – Investigación 539.12 TUL
Bbc – Aprendizaje 539.12 TUL

http://encore.ehu.es/iii/encore/record/C__Rb1730360

Christopher Tully, an active participant in the work at the LHC, explains some of the most recent experiments in the field. But this book, which emerged from a course at Princeton University, also provides a comprehensive understanding of the subject. It explains every elementary particle physics process--whether it concerns nonaccelerator experiments, particle astrophysics, or the description of the early universe--as a gauge interaction coupled to the known building blocks of matter. Designed for a one-semester course that is complementary to a course in quantum field theory, the book gives special attention to high-energy collider physics, and includes a detailed discussion of the state of the search for the Higgs boson.

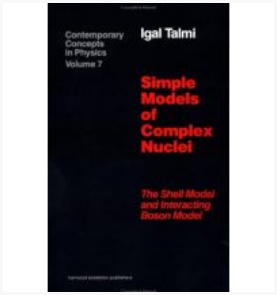


The experimental foundations of particle physics / Robert N. Cahn, Gerson Goldhaber
Cambridge University Press, Cambridge : 2009
ISBN: 9780521521475

Bbc – Investigación 539.12 CAH

http://encore.ehu.es/iii/encore/record/C__Rb1639218

Our current understanding of elementary particles and their interactions emerged from break-through experiments. This book presents these experiments, beginning with the discoveries of the neutron and positron, and following them through mesons, strange particles, antiparticles, and quarks and gluons. This second edition contains new chapters on the W and Z bosons, the top quark, B-meson mixing and CP violation, and neutrino oscillations. This book provides an insight into particle physics for researchers, advanced undergraduate and graduate students. Throughout the book, the fundamental equations required to understand the experiments are derived clearly and simply. Each chapter is accompanied by reprinted articles and a collection of problems with a broad range of difficulty.



Simple models of complex nuclei: the shell model and interacting boson model / Igal Talmi
Harwood Academic, Chur, Suiza : 1993
ISBN: 3718605503

Bbc – Investigación 539.1 TAL

http://encore.ehu.es/iii/encore/record/C__Rb1447994

A text dealing with the shell model and interacting boson model and their applications to the structure of atomic nuclei, for serious graduate students as well as professional physicists. Talmi (physics, Weizmann Institute of Science, Israel) systematically develops these models from an elementary level, through an introduction to tensor algebra, to the use of group theory in spectroscopy. The extensive and detailed appendix includes a large selection of useful formulae of tensor algebra and spectroscopy.

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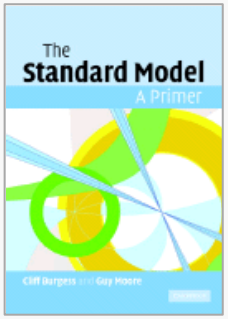

The standard model : a primer / C. P. Burgess and Guy D. Moore.
Cambridge University Press, Cambridge [etc.] : cop.2007.
ISBN: 9780521860369

Bbc – Investigación 539.1 BUR
Bbc – Aprendizaje 539.1 BUR
S DIPC 539.12 BUR

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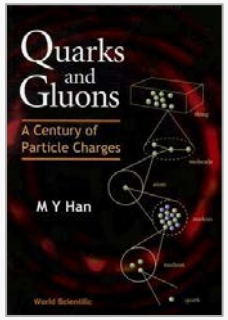
The standard model brings together two theories of particle physics in order to describe the interactions of subatomic particles, except those due to gravity. This book uses the standard model as a vehicle for introducing quantum field theory. In doing this the book also introduces much of the phenomenology on which this model is based. The book uses a modern approach, emphasizing effective field theory techniques, and contains brief discussions of some of the main proposals for going beyond the standard model, such as seesaw neutrino masses, supersymmetry, and grand unification.



Quarks and gluons : a century of particle charges / M Y Yan.
World Scientific, Singapore [etc.] : 1999.
ISBN: 9810237456

Bbc – Investigación 539.12 HAN

http://encore.ehu.es/iii/encore/record/C__Rb1381657

In this important book, the major developments in atomic, nuclear, particle and quark physics over the past one hundred years are presented in a style that is both accessible to the layperson and of value to the expert. It provides a brief history of particles, charting the discovery of electrons and photons, antimatter, atomic nuclei, strong and weak forces, and quarks and gluons. In particular, it traces the concept of "conserved charges", a phenomenon that is consistently manifested in each of these milestone developments in modern physics.

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Nº especial de la revista Nature 2013. Vol 498, nº7452.
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BERRY, R.S. How good is Niels Bohr's atomic model? *Contemporary Physics*, Jan.-Feb. 1989, v 30, n 1, p 1-19.
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KRAGH, H. Chemical aspects of Bohr's 1913 theory. *Journal of Chemical Education*, 1977, v 54, n 4, p 208-10.

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LOGAN, R.K. Bohr's Atom. *The Poetry of Physics and The Physics of Poetry.* 2010. p 177-88.
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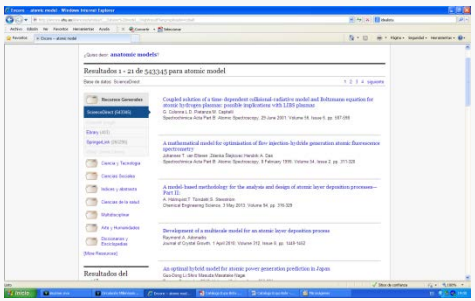

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⏩ SOBRE EL MODELO ATÓMICO DE BOHR

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http://es.wikipedia.org/wiki/Modelo_at%C3%B3mico_de_Bohr

http://newsroom.au.dk/en/current/current-centenary-of-niels-bohrs-model-of-the-atom/#

http://csep10.phys.utk.edu/astr162/lect/light/bohr.html

http://cuantozombi.com/2013/07/07/bohr-i-el-atomo-y-el-cuanto/

http://blogs.reed.edu/alan/2013/07/100-years-of-the-bohr-atom/

http://www.hiru.com/fisica/el-modelo-atomico-de-bohr-sommerfeld

http://www.slideshare.net/MarcosSanchez1/modelo-atmico-de-bohr-7451586

http://www.rsc.org/chemsoc/timeline/pages/1913.html

⏩ NIELS BOHRL

Biografías de Niels Bohr en castellano:
http://es.wikipedia.org/wiki/Niels_Bohr

http://www.biografiasyvidas.com/biografia/b/bohr.htm

http://astroseti.org/articulo/4389/

Biografías de Niels Bohr en inglés:
http://waysofknowing.info/lecsite/Frayn/bios.html

http://www-groups.dcs.st-and.ac.uk/~history/Mathematicians/Bohr_Niels.html

Discurso sobre la estructura del átomo pronunciado al recibir el premio Nobel
http://www.nobelprize.org/nobel_prizes/physics/laureates/1922/bohr-lecture.html

⏩ SU LEGADO

Archivo de Niels Bohr:
http://www.nba.nbi.dk/

Niels Bohr Institute:
http://www.nbi.ku.dk/english/

The Niels Bohr International Academy:
http://www.nbia.dk/

European Organization for Nuclear Research
http://home.web.cern.ch/

Nordic Institute for Theoretical Physics
http://www.nordita.org/

Otro premio Nobel: su hijo Aage
http://es.wikipedia.org/wiki/Aage_Niels_Bohr

⏩ EVENTOS

BOHR 2013 El *Niels Bohr Institute* y otras instituciones de Copenhague celebran el centenario del revolucionario modelo atómico de Bohr:
http://bohr2013.nbi.ku.dk/english

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Andrew Zimmerman Jones | blogs útiles e interesantes sobre física
http://physics.about.com/od/physics101thebasics/tp/physicsblogs.htm

American Physical Society
http://www.physicscentral.com/
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IOP blog
http://blog.physicsworld.com/

Udo Anders | sobre la historia de la química cuántica
http://www.quantum-chemistry-history.com/

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El zombi de Schrödinger
http://cuantozombi.com/

Cuadernos de cultura científica:
http://culturacientifica.com/

Zientzia kaiera: zientzia eta teknologia, besterik ez
http://zientziakaiera.wordpress.com/

Promovido por Kultura Zientzifikiko Katedra/ Cátedra de Cultura Científica/ (EHU/UPV)
http://mappingignorance.org/

Bilboko Ingeniaritza Goi Eskola Teknikoa. Euskal Herriko Unibertsitatea (EHU-UPV). Industria Teknologiako Ingeniaritza Graduko, Ingurumen Ingeniaritzako Graduko eta Industria Antolakuntzako Graduko Fisika irakasgaiko Bloga:
http://fisikaingeniaritza.blogspot.com.es/

Zientziaberri
http://zientziaberri.wikispaces.com/Fisika+orokorra

Naukas: ciencias, escepticismo y humor
http://naukas.com/

Quantum13: Passion for knowledge
http://www.quantum13.eu/es/home

INSTITUCIONES

Center for History of Physics:
http://www.aip.org/history/

Institute of Physics. History of Physics Group
http://www.iop.org/activity/groups/subject/hp/

American Physical Society. Forum on the History of Physics
http://www.aps.org/units/fhp/

Donostia International Physics Center
http://dipc.ehu.es/

Massachusetts Institute of Technology
http://www.mit.edu/

Royal Society of Chemistry
http://www.rsc.org/

American Chemical Society
http://www.acs.org/content/acs/en.html

International Centre for Theoretical Physics
http://www.ictp.it/

RECURSOS

MIT open course ware:
http://ocw.mit.edu/courses/audio-video-courses/

El portal de aprendizaje permanente Hiru.com
http://www.hiru.com/

Páginas webs académicas con acceso a videos educativos sobre diferentes materias:

http://academicearth.org/about/

http://www.cosmolearning.com/

http://fora.tv/aboutfora

http://video.mit.edu/

http://www.mobento.com/

http://www.openculture.com/

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http://videolectures.net/

http://www.yovisto.com/

http://www.youtube.com/education?category=University

Niels Bohr arriving at his institute by bicycle.

"Hay algunas cosas que son tan serias que solo podemos bromear con ellas."
Niels Bohr.

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Azaroaren 8ra arte