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1. Main Page

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주요 온라인 전공 참고 자료



Compendium on Electromagnetic Analysis
From Electrostatics to Photonics: Fundamentals and Applications for Physicists and Engineers
(In 5 Volumes)



Handbook of Synthetic Methodologies and Protocols of Nanomaterials
(In 4 Volumes)



World Scientific Reference of Hybrid Materials
(In 3 Volumes)



Health Care Policy in East Asia: A World Scientific Reference
(In 4 Volumes)



World Scientific Reference on Asia-Pacific Trade Policies
(In 2 Volumes)

1. Main Page

1 More titles available

2 Most Downloaded E-books

- **Communicating Science**
A Practical Guide for Engineers and Physical Scientists
- **Viruses: More Friends Than Foes**
- **Stock Market Crashes**
Predictable and Unpredictable and What to do About Them
- **Handbook of Solid State Batteries**
2nd Edition
- **Algorithms**
Design Techniques and Analysis
- **2D Inorganic Materials beyond Graphene**
- **Hopf Algebras**
- **Particles and Quantum Fields**
- **An Introduction to Black Holes, Information and the String Theory Revolution**
The Holographic Universe

1. 주제별 더 많은 타이틀 보기
2. 가장 많이 다운로드 된 타이틀
3. 새로 출간된 저널

3 New Journals



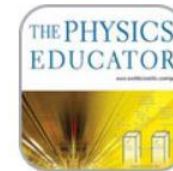
The International Journal of Accounting



Global Economy Journal

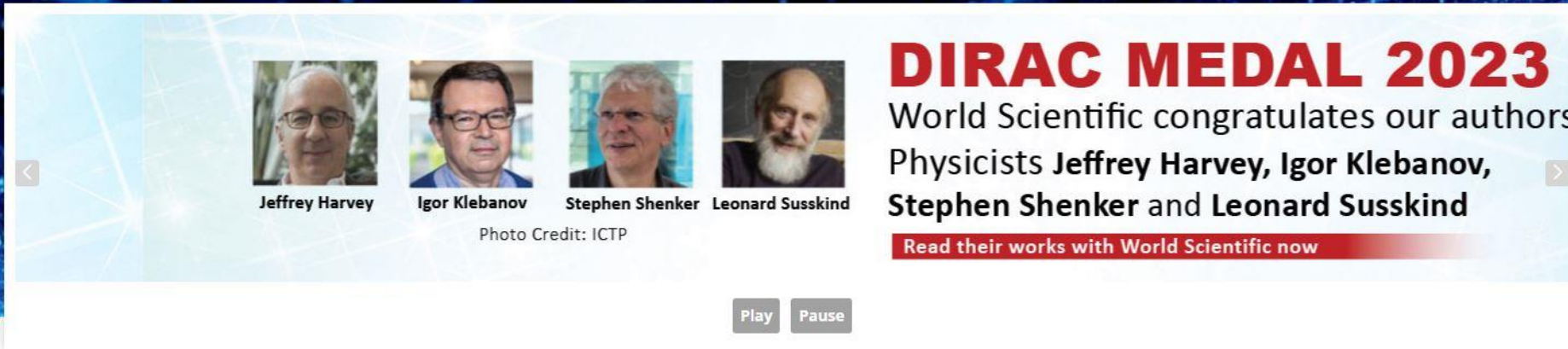


The Journal of FinTech



The Physics Educator

1. Main Page



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World Scientific congratulates our authors
Physicists **Jeffrey Harvey, Igor Klebanov, Stephen Shenker and Leonard Suskind**

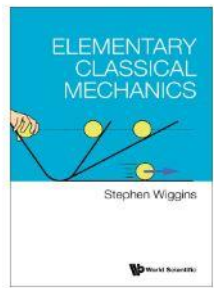
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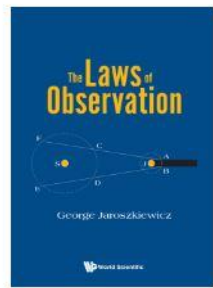
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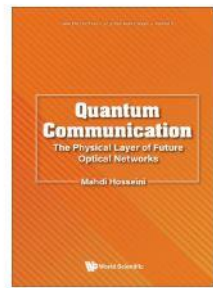
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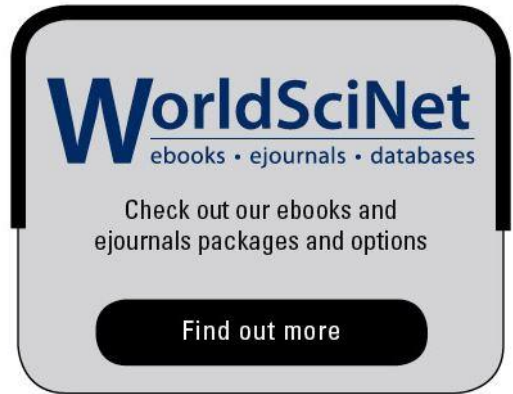
Elementary Classical Mechanics
by Stephen Wiggins



The Laws of Observation
by George Jaroszkiewicz



Quantum Communication
The Physical Layer of Future Optical Networks



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- How to conduct an HRI experiment
- Open Creativity: Increased Creativity Due to Network Relationships
- Characterizing Climate Change from Heating, not merely Temperature



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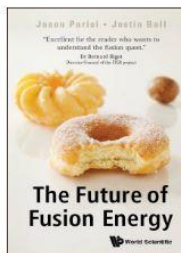
4 BESTSELLERS

2 NEWS

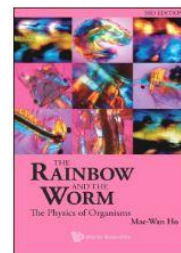
World Scientific Congratulates Professor Michel Talagrand for Being A
April 4, 2024

World Scientific Authors, Professors Terrence Sejnowski & Haim Sompolinsky
March 22, 2024

Remembering Professor Ralph Kenna (27 August 1964 – 26 October 2023)
March 12, 2024



The Future of Fusion Energy
by Jason Parisi & Justin Ball



The Rainbow and the Worm
The Physics of Organisms
3rd Edition
by Mae-Wan Ho



1. 보도자료
2. 새로운 소식
3. 새로 등록된 리뷰
4. 베스트셀러 타이틀
5. 주요 특별 원문

More »

5 FEATURED SPECIAL ISSUES

3 NEW REVIEWS



Climate Change and Energy Options for India
by Dinesh Kumar S



Open Access Special Issue on Neurophotonics

Guest Editors: Sergio Fantini, Ling Fu, and Sabrina Brigadoi

This special issue, which includes seven research articles, aims to highlight recent advances in the development of neurophotonic techniques and their applications in biological discovery, disease diagnosis, and treatment. This special issue was also prepared to celebrate the 20th Anniversary of Wuhan National Laboratory for Optoelectronics.

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All Subjects ✓ 1

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Chemistry

Computer Science

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Engineering / Acoustics

Environmental Science

Life Sciences / Biology

Materials Science

Mathematics

Medicine

Nanotechnology & Nanoscience

Nonlinear Science, Chaos & Dynamical Systems

Financial Engineering
Selected Works of Alexander Lipton
by Alexander Lipton

Narrow Results 6

RESULTS: 1 - 20 of 14219 PER PAGE: 20 50 100 SORT: ALPHABETICALLY

2 Publication Type

Books 14030

Book Series 443

Journals 189

3 Publication Date

Last Year 576

Last 6 Months 285

Last 3 Months 130

Last Months 40

Last Week 36

4 Subjects

Architecture / Building Management 78

Asian Studies 1167

Business & Management 1123

Chemistry 1304

Computer Science 1648

MORE (14) ↓

5 Book types

Major Reference Works 379

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6 Filter by Title Initial

0-9

A B C D E F G H I J

K L M N O P Q R S T

U V W X Y Z

Book No Access
The "Golden" Non-Euclidean Geometry
Hilbert's Fourth Problem, "Golden" Dynamical Systems, and the Fine-Structure Constant
By (author): ... See all authors
Assisted by: Scott Olsen (College of Ce
Sep 2016

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The "Thermodynamic" Univ
Exploring the Limits of Physics
By (author): B G Sidharth (Internation
May 2008

Book No Access
The (1+1)-Nonlinear Univers
By (author): James D Louck (Retired Los A
Mar 2015

Book No Access
The (Pre-)Dawning of Functional Specialization in Physics
By (author): Terrance J Quinn (Middle Tennessee State University, USA)
May 2017

Book No Access
1,1'-Binaphthyl-Based Chiral Materials
Our Journey
By (author): Pu Lin (University of Virginia, USA)
Aug 2009

Book No Access
10 Things You Must Know About the International Chemistry Olympiad (ICHO)
A Guide to the IChO Competition
Revised Edition
By (author): H-y Chang (National Taiwan Normal University, Taiwan) and
Fun Man Fung (National University of Singapore, Singapore)
Oct 2021

- 모든 주제별(All Subjects) 선택 시
- 1. 출판 종류에 따라: 책, 책 시리즈, 저널
- 2. 출판 연도에 따라: 작년, 6개월/3개월/한 달 전 등
- 3. 세부 주제에 따라: 건축, 아시아 연구, 경영 등
- 4. 책 종류에 따라: Reference / 교재
- 5. 타이틀 알파벳에 따라: A-Z로 분류
- 6. 결과 나열 방법: 한 페이지 당 결과 수, 정렬 방법

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Subject Journals Books E-Products Partn

All Subjects Asian Studies Business & Management **Chemistry** Computer Science Economics & Finance

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2 Journals » See all

Journal of Porphyrins and Phthalocyanines (JPP)

Journal of Theoretical and Computational Chemistry (JTCC)

Molecular Frontiers Journal (MFJ)

Functional Materials Letters

3 New Titles » See all

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Forthcoming

Forthcoming

Forthcoming

Financial Engineering
Selected Works of Alexander Lipton
by Alexander Lipton

Vibra
Dete
Engin

edited by Ali S. NOBARI & IM H. FERFI ALIABADI

KNHO PHUA & LEON A. TAKHTAJAN

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- 1. 세부 주제
- 2. 해당 저널
- 3. 새로 출간된 타이틀
- 4. 새로 등록된 리뷰
- 5. 베스트셀러 타이틀
- 6. 교재
- 7. 북 시리즈

4 New Reviews » See all

Applied Theoretical Organic Chemistry
edited by Dean J Tantillo

Atmospheric Chemistry
From the Surface to the Stratosphere
by Grant Ritchie

5 Bestsellers » See all

Reminiscences of Ahmed H. Zewail: Photons, Electrons and What Else?
A Portrait from Close Range. Remembrances of his Group Members and Family
edited by Abderrazak Douhal, John Spencer Baskin & Dongping Zhong

Wonders of Water
The Hydrogen Bond in Action
by Ivar Olovsson

The Chemistry of Inkjet Inks
edited by Shimo Maggassi

Entropy
The Truth, the Whole Truth, and Nothing But the Truth
by Arieh Ben-Naim

6 Textbooks » See all

Problems of Instrumental Analytical Chemistry
A Hands-On Guide
by JM Andrade-Garda, A Carriosa-Zubieta, MP Gómez-Carracedo, MA Maestro-Saavedra, MC Prieto-Blanco & RM Soto-Ferreiro

Bioanalytical Chemistry
2nd Edition
by Andreas Manz, Petra S Dittrich, Nicole Pamme & Dimitri Iossifidis

Basic Physical Chemistry
The Route to Understanding
Revised Edition
by E Brian Smith

Carbohydrate Chemistry
Fundamentals and Applications
by Raimo Alén

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Catalytic Science Series

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1

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 - 최신 원문

4 **LATEST ARTICLES**

<p>Analysis of s-wave, p-wave and d-wave holographic superconductors in Hořava-Lifshitz gravity</p> <p>Kai Lin, Xiao-Mei Kuang, Wei-Liang Qian, Qiyan Pan and A. B. Pavan</p> <p>Modern Physics Letters A Online ready</p>	<p>The structural, elastic and thermodynamic properties of intermetallic phases in Mg-Sn-Si-Ca(Sr) alloys: A first-principles study</p> <p>Yan Li, Yuhong Zhao, Hua Hou and Xiaomin Yang</p> <p>International Journal of Modern Physics B Online ready</p>	<p>Elastic properties of the charge density wave system HoTe₃</p> <p>M. Saint-Paul, C. Guttin, P. Lejay, O. Leynaud and P. Monceau</p> <p>International Journal of Modern Physics B Online ready</p>
<p>tCG torsion pairs</p> <p>Daniel Bravo and Carlos E. Parra</p> <p>Journal of Algebra and Its Applications Online ready</p>	<p>Editorial Note</p> <p>Reviews in Mathematical Physics Online ready</p>	<p>Simulation and experimental study of binder droplet infiltration in 3DP technology</p> <p>Yuanyuan Wang, Pengfei Jia, Weidong Yang, Kai Peng and Sixiang Zhang</p> <p>Modern Physics Letters B Online ready</p>
<p>Hydrogen energy-level shifts induced by the atom motion: Crossover from the Lamb shifts to the motion-induced shifts</p> <p>A. I. Agafonov</p> <p>Modern Physics Letters B Online ready</p>	<p>An integrated framework for anomaly detection in big data of medical wireless sensors</p> <p>Bharti Saneja and Rinkle Rani</p> <p>Modern Physics Letters B Online ready</p>	<p>Effects of oxygen partial pressure on the microstructure, electrical and optical properties of the Sn-doped In₂O₃ thin films</p> <p>Xiaochan Liu, Yukai An, Zhen Lin and Jiwen Liu</p> <p>Modern Physics Letters B Online ready</p>

Journal Catalogue

See our Online Journal Catalogue for the latest updates. For other catalogues/flyers covering our latest and exciting publications, please visit our e-catalogues page.

2 **New Journals**



3 **Browse by Subject**

Asian Studies	Business & Management	Chemistry
Economics & Finance	Engineering / Acoustics	Environmental Science
Materials Science	Mathematics	Medicine
Nonlinear Science, Chaos & Dynamical Systems	Physics and Astronomy	Social Sciences

2-3. Browse – by Books

1 New Titles > See all



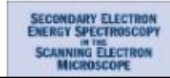
Handbook of Applied Investment Research
edited by John B Guerard & William T Ziemba



Chemistry and Technology of Alternate Fuels
by James G Speight



Handbook of Porous Synthesis, Properties, Applications (In 4 Volumes)
editor-in-chief Vitaly G G Kiss & David Eisenberg

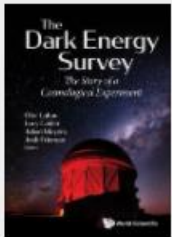


- 책(Books) 선택 시
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- 2. 새로 등록된 리뷰
- 3. 주제별 브라우징
- 4. 베스트셀러 타이틀

3 Browse by Subject

Asian Studies	Business & Management	Chemistry	Computer Science
Economics & Finance	Education	Engineering / Acoustics	Environmental Science
Life Sciences / Biology	Materials Science	Mathematics	Medicine
Nanotechnology & Nanoscience	Nonlinear Science, Chaos & Dynamical Systems	Physics and Astronomy	Popular & General Science
Social Sciences	Chinese Titles		

2 New Reviews

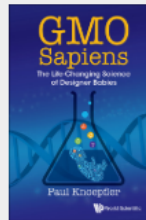


The Dark Energy Survey
The Story of a Cosmological Experiment
edited by Ofer Lahav, Lucy Calder, Julian Mayers & Josh Frieman

"This book summarizes all there is to know about the Dark Energy Survey (DES), the primary objective of which is to understand the nature and potential evolution of dark energy. With observations spanning 2012 to 2019, the survey photometrically characterized many millions of objects in the sky. The DES looked at four key science areas: type Ia supernovae, large-scale structure, clusters of galaxies and weak lensing. The book offers, however, a much wider view of the survey, including its inception, planning and running, science beyond cosmology, and even anthropological, philosophical and artistic reflections on the DES."

Nature Astronomy

4 Bestsellers > See all



An Introduction to Black Holes, Information and the String Theory Revolution
The Holographic Universe
by Leonard Susskind & James Lindesay



Marketing for Competitiveness: Asia to the World
In the Age of Digital Consumers
by Philip Kotler, Hermawan Kartajaya & Den Huan Hooi



A Walk Through Combinatorics
An Introduction to Enumeration and Graph Theory
4th Edition
by Miklós Bóna



An Introduction to Black Holes, Information and the String Theory Revolution
The Holographic Universe
by Leonard Susskind & James Lindesay

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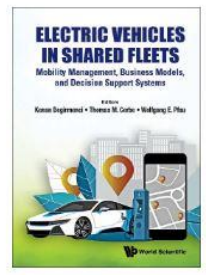
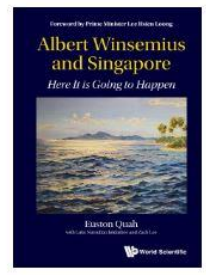
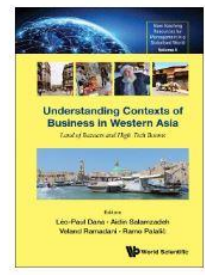
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Mathematics and Computer Science Prize Laureate

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Chapter 8: Carbon Tracker Initiative
Henrik Jeppesen
World Scientific Encyclopedia of Climate Change | 29 Mar 2021
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Chapter No Access
Chapter 8: Economic Modeling of Carbon Fee-and-Dividend Policies
Scott Nystrom
World Scientific Encyclopedia of Climate Change | 29 Mar 2021

Article No Access
ANALYSIS OF THE CARBON ALLOWANCE ALLOCATION AND SECTORAL COVERAGE IN THE CARBON MARKET UNDER THE NEW CLIMATE AMBITION: A CASE STUDY IN CHINA
SI CHENG, JIHONG ZHANG and SHAOZHOU QI
Climate Change Economics | 30 Apr 2022
Preview Abstract

Publication Type: Journals and Books (38806), Books (24718), Journals (14088)

Article Type: Chapter Item (22284), Research Article (12682), Back Matter (1412), Front Matter (998), Review Article

Publication Date

Author

Publication/Book Series

Subjects

Book types

Access

■ 검색 결과

1. 출판물 종류, 원문 종류, 출판 연도, 저자, 출판물, 주제, 책 종류, 원문 액세스 권한에 따라 결과값 필터링 가능
2. 원문 및 챕터, 혹은 책 제목에 한하여 검색 결과 나열
3. 검색 결과 저장(개인 계정 필요) 및 RSS 설정
4. 고급 검색, 검색 기록, 검색 저장소를 이용하여 검색 구체화
5. 한 페이지 당 결과 수, 정렬 방법 지정하여 결과 나열 방법 선택

3-2. Search – Advanced Search

Anywhere

Published in

Publication Date All dates

Last

Custom range

Search Tips

Boolean searches
You can use the Boolean Operators AND, OR and NOT within search fields. By default an AND relationship is assumed between search terms unless another operator is specified.

Searching for authors
To search for multiple authors, separate each author name with either AND or OR. Using AND will search for content that has been authored by the authors. Using OR will search for content that

Advanced ^

include Articles in Ahead of Print

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- 고급 검색 팁
- 1. 불리언 연산자 검색: AND, OR, NOT의 불 연산자 이용(미 지정 시, AND로 자동설정)
- 2. 저자 검색: 여러 저자 검색 시 AND와 OR 응용 가능
- 3. 구문 검색: ""(따옴표) 활용으로 해당 구문과 정확히 일치하는 단어 검색 가능
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- ex) Europe* → Europe and European, Europe? → Europe
(단, 검색어 시작과 인용 부호로 된 구문 검색 시 사용 불가능)
- 5. DOI 검색: 10.3366/code.2016.0000 형식을 사용하여 DOI 검색

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4. Access Journal

Journal of Porphyrins and Phthalocyanines
ISSN (print): 1088-4246 | ISSN (online): 1099-1409

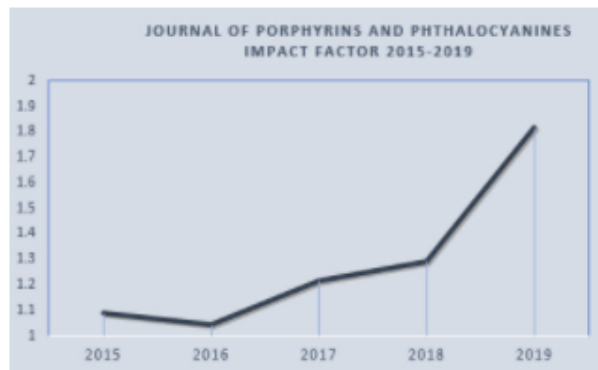
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About the Journal

5 **IMPACT FACTOR** We are pleased to announce that the Journal of Porphyrins and Phthalocyanines has achieved an impact factor of 1.816 in the year 2019



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JPP Content List 2009-2020

SCIENCE WRITING AND

특정 저널 선택 시

1. 온라인 제공 가능: 검토가 끝난 최종 버전, Volume/원문/DOI로 검색 및 인용 가능
2. 최신 Issue: 가장 최근에 발행된 Issue
3. 허용된 논문 목록
4. 저널 Issue: 해당 저널에서 제공 가능한 모든 Issue
5. Impact Factor 정보

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Journal of Porphyrins and Phthalocyanines
ISSN (print): 1088-4246 | ISSN (online): 1099-1409

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	2021	2020	
Vol. 25, No. 03 CURRENT ISSUE pp.181-271	Vol. 25, No. 02 pp.75-179		Vol. 25, No. 01 pp.1-74

Pages: 75-74
<https://doi.org/10.1142/S1088424620500534>

Fluorinated corroles were biologically evaluated regarding their binding affinity to human serum albumin (HSA) and calf-thymus DNA (CT-DNA) via multiple spectroscopic techniques combined with molecular docking calculations. Corroles 1a and 1b interacted spontaneously and moderately via the static process with HSA, however, corrole 1b could easily be released in the human bloodstream ($K_a \sim 103 \text{ M}^{-1}$ at 310 K). For CT-DNA analysis, the corroles interacted spontaneously by non-classical modes in the minor groove, corroborating molecular docking results. Overall, the pyrene moiety increased interactions with both HSA and CT-DNA, likely due to pyrene planarity.

➤ Static binding HSA and corrole interactions;
➤ Higher perturbation in the albumin structure;
➤ CT-DNA binding assays by non-classical modes;
➤ Minor groove as the main binding site in DNA;

Preview Abstract

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Fluorescent pyrene moiety in fluorinated C₆F₅-corroles increases the interaction with HSA and CT-DNA

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Two fluorinated *meso*-C₆F₅-corroles (5,15-bis(pentafluorophenyl)-10-(phenyl)corrole and 5,15-bis(pentafluorophenyl)-10-(1-pyrenyl)corrole) were biologically evaluated in terms of binding affinity to human serum albumin (HSA) and calf-thymus DNA (CT-DNA) *via* multiple spectroscopic techniques under physiological conditions combined with molecular docking calculations. The HSA: corrole interaction is spontaneous and moderate *via* static binding, disturbing both secondary and tertiary albumin structures at high fluorinated corrole concentrations. The competitive binding studies indicated positive cooperativity or allosteric activation, while molecular docking calculations suggested that both fluorinated corroles bind preferentially inside subdomains IIA and IB (sites I and III, respectively). The experimental CT-DNA binding assays indicated that fluorinated corroles interact spontaneously by non-classical modes in the minor groove of the CT-DNA strands *via* static fluorescence quenching mechanism. Molecular docking results also showed the minor groove as the main binding site for CT-DNA. Overall, the pyrene moiety increased the interaction with HSA and CT-DNA, which is probably due to the planarity and volume that favors the pyrene unit to be buried inside the biomacromolecule pockets.

Keywords: Corroles ■ CT-DNA-binding ■ HSA-binding ■ spectroscopy ■ molecular docking

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A review of iron and cobalt porphyrins, phthalocyanines and related complexes for electrochemical and photochemical red... 1 / 20

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A review of iron and cobalt porphyrins, phthalocyanines and related complexes for electrochemical and photochemical reduction of carbon dioxide

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Dedicated to Professor Shunichi Fukuzumi on the occasion of his retirement

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ABSTRACT: This review summarizes research on the electrochemical and photochemical reduction of CO₂ using a variety of iron and cobalt porphyrins, phthalocyanines and related complexes. Metalloporphyrins and metallophthalocyanines are visible light absorbers with extremely large extinction coefficients. However, yields of photochemically-generated active catalysts for CO₂ reduction are typically low owing to the requirement of a second photoinduced electron. This requirement is not relevant to the case of electrochemical CO₂ reduction. Recent progress on efficient and stable electrochemical systems includes the use of FeTPP catalysts that have prepositioned phenyl OH groups in their second coordination spheres. This has led to remarkable progress in carrying out coupled proton-electron transfer reactions for CO₂ reduction. Such ground-breaking research has to be continued in order to produce renewable fuels in an economically feasible manner.

KEYWORDS: CO₂ reduction, porphyrin, phthalocyanine, cobalt, iron.

I. INTRODUCTION

The global carbon cycle is a closed system with all fossil fuels currently burned originating from photosynthetic carbon dioxide fixation over millions of years. An imbalance in the rates of consumption vs. natural fixation with increasing human demand for energy leads to two major concerns: the rising concentration of atmospheric CO₂, and the inevitable decline of extractable fossil fuels. The problem of atmospheric concentrations can be alleviated to some extent through CO₂ capture/sequestration technology [1]; however, a conversion/utilization or recycling scheme is perhaps more ideal since the need for energy is also addressed. If the recycling technology is ultimately powered by inexhaustible, although intermittent, solar energy, CO₂ is then viewed as a redox mediator in which diffuse solar energy is stored in the form of chemical bonds by its reduction and electrical energy is obtained by oxidation of the reduced products.

The foremost challenge to CO₂ recycling is its chemically inert nature. Direct electrochemical reduction to CO₂^{•-} (Equation 1) is highly unfavorable due in part to the geometric rearrangement from linear to bent. This difficulty is reflected by the standard potential of -1.90 V vs. NHE [2]. Energy requirements for proton assisted multi-electron reductions at pH 7 (Equations 2-6) are substantially lower; however, catalysts are necessary to mediate the microscopic steps involved in the multi-proton, multi-electron reductions. Transition metal complexes with a variety of accessible oxidations states (including ligand-localized reductions) are well-suited for this task and often provide product selectivity and tunable activity [3-5]. Nevertheless, reduction beyond formic acid or CO remains rare and further developments are needed.

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$$\text{CO}_2 + \text{e}^- \rightarrow \text{CO}_2^{\bullet-} \quad E^{\circ} = -1.90 \text{ V} \quad (1)$$
$$\text{CO}_2 + 2\text{H}^+ + 2\text{e}^- \rightarrow \text{CO} + \text{H}_2\text{O} \quad E^{\circ} = -0.53 \text{ V} \quad (2)$$
$$\text{CO}_2 + 2\text{H}^+ + 2\text{e}^- \rightarrow \text{HCO}_2\text{H} \quad E^{\circ} = -0.61 \text{ V} \quad (3)$$

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