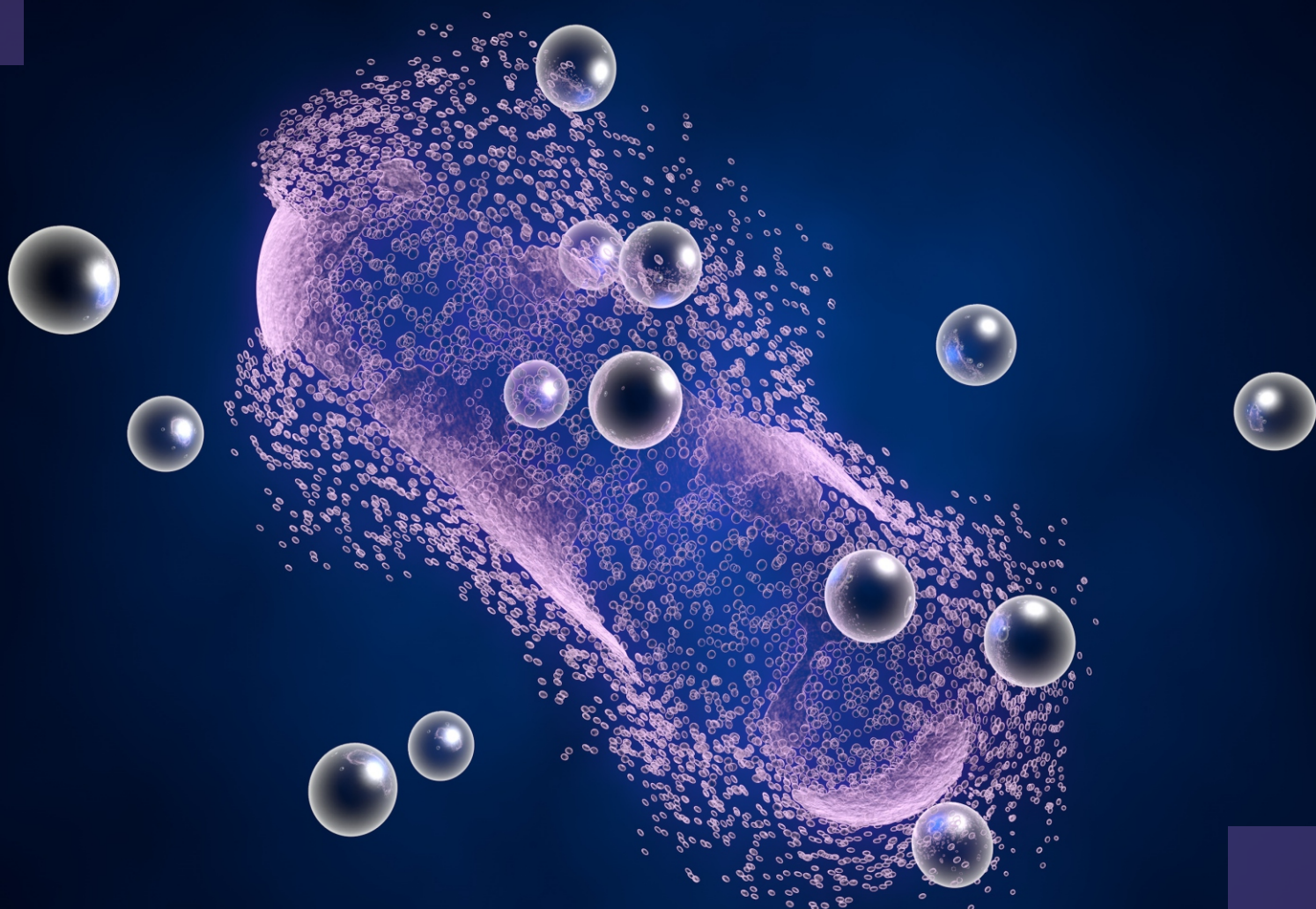


ISSN: 2169-0510 Volume 11, Number 2, May 2022



Advances in Nanoparticles



ISSN: 2169-0510



9 772169 051001 02

<https://www.scirp.org/journal/anp>

Journal Editorial Board

ISSN 2169-0510 (Print) ISSN 2169-0529 (Online)

<https://www.scirp.org/journal/anp>

Editorial Board

Prof. SAHIN AHMED	the Faculty of Engineering and Technology, Gauhati University, India
Prof. Talib M. Albayati	University of Technology, Chemical Engineering Department, Baghdad, Iraq
Dr. Maria do Carmo Martins Alves	Universidade Federal do Rio Grande do Sul—UFRGS, Brazil
Dr. Zhengdong Cheng	Texas A&M University, USA
Dr. Narayan Chandra Das	Indiana University, USA
Dr. Ahmed A. Farghaly	Argonne National Laboratory, USA
Dr. Cristina Femoni	University of Bologna, Italy
Prof. OSAMA A FOUAD	Nanostructured Materials & Nanotechnology Division Advanced Materials Department Central Metallurgical Research & Development Institute, Egypt
Prof. Mauro Comes Franchini	Department of Organic Chemistry A. Mangini, Italy
Prof. M. R. R. Fuente	National Autonomous University of Mexico, Mexico
Dr. Carmen L. Gomes	Texas A&M University, USA
Dr. A. Nirmala Grace	VIT University, India
Prof. Alireza Heidari	California South University, USA
Dr. Muhammad Delwar Hussain	Texas A&M Health Sciences Center, USA
Dr. Shahid Hussain	National Engineering Research Centre for Magnesium Alloys, China
Dr. Sunirmal Jana	Sol-Gel Division, Central Glass and Ceramic Research Institute, India
Prof. R. Vasant Kumar	University of Cambridge, UK
Prof. Ying-Ling Liu	National Tsing Hua University, Chinese Taipei
Dr. S. R. Mishra	Siksha'O'Anusandhan Deemed to be University, India
Dr. Elisabeta Mitran	Louisiana State University, USA
Dr. Ahmed A. Mohamed	Delaware State University, USA
Dr. Akira Otsuki	Curtin University, Australia
Dr. Vilas G. Pol	Argonne National Laboratory, USA
Prof. Anjanapura V. Raghu	Jain Deemed-to-be University, India
Dr. PRASANTA KUMAR RAUL	Defence Research Laboratory, Tezpur DRDO, Ministry of Defence, India
Prof. SUNIPA ROY	Jadavpur University, India
Prof. Md Motin Seikh	Department of Chemistry, Visva-Bharati University, India
Dr. Ceyda Tuba Sengel-Turk	Ankara University, Turkey
Dr. Shirish H. Sonawane	National Institute of Technology, India
Dr. Rajasekaran Swaminathan	Intel Corporation, USA
Prof. Jung-Chang Wang	National Taiwan Ocean University, Chinese Taipei
Dr. Suhe Wang	University of Michigan, USA
Dr. Suying Wei	Lamar University, USA
Prof. Gayle E. Woloschak	Northwestern University, USA
Prof. Wing-Tak Wong	The Hong Kong Polytechnic University, China
Prof. Mufei Xiao	Universidad Nacional Autónoma de México, Mexico
Prof. Khushwant S. Yadav	Rajeev Gandhi College of Pharmacy, India
Dr. William W. Yu	Rice University, USA
Dr. Xiangwu Zhang	North Carolina State University, USA

Table of Contents

Volume 11 Number 2

May 2022

Bio-Fabrication of Silver Nanoparticles Using *Catha edulis* Extract: Procedure

Optimization and Antimicrobial Efficacy Encountering Antibiotic-Resistant Pathogens

A. A. Numan, M. Ahmed, M. S. A. Galil, M. Al-Qubati, A. A. Raweh, E. A. Helmi.....31

**The Effects of an Inclined Magnetic Field, Brownian Motion, and Thermophoresis on
the Flow of Electrically Conducting and Chemically Reacting Casson Nanofluids Using
Soret-Dufour Mechanisms**

T. W. Akaje, B. I Olajuwon.....55

Advances in Nanoparticles (ANP)

Journal Information

SUBSCRIPTIONS

The *Advances in Nanoparticles* (Online at Scientific Research Publishing, <https://www.scirp.org/>) is published quarterly by Scientific Research Publishing, Inc., USA.

Subscription rates:

Print: \$59 per issue.

To subscribe, please contact Journals Subscriptions Department, E-mail: sub@scirp.org

SERVICES

Advertisements

Advertisement Sales Department, E-mail: service@scirp.org

Reprints (minimum quantity 100 copies)

Reprints Co-ordinator, Scientific Research Publishing, Inc., USA.

E-mail: sub@scirp.org

COPYRIGHT

Copyright and reuse rights for the front matter of the journal:

Copyright © 2022 by Scientific Research Publishing Inc.

This work is licensed under the Creative Commons Attribution International License (CC BY).

<http://creativecommons.org/licenses/by/4.0/>

Copyright for individual papers of the journal:

Copyright © 2022 by author(s) and Scientific Research Publishing Inc.

Reuse rights for individual papers:

Note: At SCIRP authors can choose between CC BY and CC BY-NC. Please consult each paper for its reuse rights.

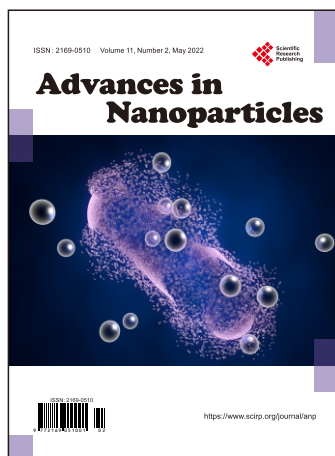
Disclaimer of liability

Statements and opinions expressed in the articles and communications are those of the individual contributors and not the statements and opinion of Scientific Research Publishing, Inc. We assume no responsibility or liability for any damage or injury to persons or property arising out of the use of any materials, instructions, methods or ideas contained herein. We expressly disclaim any implied warranties of merchantability or fitness for a particular purpose. If expert assistance is required, the services of a competent professional person should be sought.

PRODUCTION INFORMATION

For manuscripts that have been accepted for publication, please contact:

E-mail: anp@scirp.org



Advances in Nanoparticles

ISSN 2169-0510 (Print) ISSN 2169-0529 (Online)

<https://www.scirp.org/journal/anp>

Advances in Nanoparticles (ANP) is a quarterly open access journal. The goal of this journal is to provide a platform for scientists and academicians all over the world to promote, share, and discuss various new issues and developments in all aspects of nanoparticle science and technology and their applications.

Subject Coverage

All manuscripts must be prepared in English, and are subject to a rigorous peer-review process. Accepted papers will immediately appear online followed by printed in hard copy. The areas covered by *Advances in Nanoparticles (ANP)* include but are not limited to the following fields:

- Aerosol Nanoparticles
- Application of Systems, Structures and Devices with Novel Functions Obtained Nanoparticles
- Biological Nanoparticles and Nanoparticles in Living Systems
- Block Copolymer Nanoparticles and Polymeric Nanoparticles
- Catalytic Uses of Nanoparticles
- Characterization and Measurement of Nanoparticles
- Colloidal Nanoparticles
- Core-shell Nanoparticles and Nanoparticle Hybrid Nanostructures
- Cosmetic Applications of Nanoparticles
- Energy Applications of Nanoparticles
- Environmental Impact of Nanoparticles
- Food Science and Nanoparticles
- Functionalization of Nanoparticles
- Fundamental Science and Technology of Nanoparticles
- Materials and Polymers Containing Nanoparticles
- Modeling of Nanoparticles
- Modifications of Surfaces with Nanoparticles
- Multifunctional Nanoparticles
- Nanobiotechnology
- Nanocomposites
- Nanofabrication and Patterning of Nanoparticles
- Nanofluidics
- Nanomedicine and Nanoparticles in Medicine
- Nanoparticle Beams
- Nanoparticle Coatings
- Nanoparticles for Sustainable Growth and in Water Purification
- Nanoparticles in Decorative Industry
- Nanoparticles in Nanomachining and Nanoengineering
- Nanoparticulate Thin Films
- Nanophotonics
- Nanosensors
- Nanotechnology and Nanoelectronics
- Nanotoxicology
- Novel Applications of Nanoparticles
- Self-assembled Nanostructures
- Surface Functionality of Nanostructures
- Synthesis and Properties of Nanoparticles

We are also interested in: 1) Short reports—2-5 page papers where an author can either present an idea with theoretical background but has not yet completed the research needed for a complete paper or preliminary data; 2) Book reviews—Comments and critiques.

Notes for Intending Authors

Submitted papers should not have been previously published nor be currently under consideration for publication elsewhere. Paper submission will be handled electronically through the website. All papers are refereed through a peer review process. For more details about the submissions, please access the website.

Website and E-Mail

<https://www.scirp.org/journal/anp>

E-mail: anp@scirp.org

What is SCIRP?

Scientific Research Publishing (SCIRP) is one of the largest Open Access journal publishers. It is currently publishing more than 200 open access, online, peer-reviewed journals covering a wide range of academic disciplines. SCIRP serves the worldwide academic communities and contributes to the progress and application of science with its publication.

What is Open Access?

All original research papers published by SCIRP are made freely and permanently accessible online immediately upon publication. To be able to provide open access journals, SCIRP defrays operation costs from authors and subscription charges only for its printed version. Open access publishing allows an immediate, worldwide, barrier-free, open access to the full text of research papers, which is in the best interests of the scientific community.

- High visibility for maximum global exposure with open access publishing model
- Rigorous peer review of research papers
- Prompt faster publication with less cost
- Guaranteed targeted, multidisciplinary audience



**Scientific
Research
Publishing**

Website: <https://www.scirp.org>

Subscription: sub@scirp.org

Advertisement: service@scirp.org