

## PROCEEDINGS OF THE 7<sup>TH</sup> WORLD CONGRESS ON RECENT ADVANCES IN NANOTECHNOLOGY (RAN'22)

April 04 - 06, 2022 | LISBON, PORTUGAL Virtual Conference

> © COPYRIGHT 2022, INTERNATIONAL ASET INC. – ALL RIGHTS RESERVED. ISBN: 978-1-990800-01-6 | ISSN: 2371-5308

## TABLE OF CONTENTS

Welcome Message from the Conference Chair	
About RAN'22	4
Scientific Committee	5
Keynote Speakers	6
List of Papers	
Sponsors	
Journal Publication	21
RAN'23	22
Ethics & Malpractice	23
Contact Us	

## WELCOME MESSAGE FROM THE CONFERENCE CHAIR

On behalf of the International Academy of Science, Engineering and Technology (International ASET Inc.), the organizing committee would like to welcome you to the 7th World Congress on Recent Advances in Nanotechnology (RAN'22).

Due to COVID-19 the 7th World Congress on Recent Advances in Nanotechnology (RAN'22) which was supposed to be held in Lisbon, Portugal will be held virtually instead on April 04 - 06, 2022.

RAN is aimed to become one of the leading international annual congresses in the field of nanotechnology. This congress will provide excellent opportunities to the scientists, researchers, industrial engineers, and university students to present their research achievements and to develop new collaborations and partnerships with experts in the field.

While each conference consists of an individual and separate theme, the 2 conferences share considerable overlap, which prompted the organization of this congress. The goal of this undertaking is to bring together experts in each of the specialized fields, and at the same time allow for cross pollinations and sharing of ideas from the other closely related research areas.

We thank you for your participation and contribution to the 7th World Congress on Recent Advances in Nanotechnology (RAN'22). We wish you a very successful and enjoyable experience.

#### Dr. Wolfgang Ensinger

Congress Chair and Proceedings Editor RAN'22

#### **Dr. João Manuel Cunha Rodrigues** *Congress Local Co-Chair RAN'22*

**Dr. Sofia Lima** *Congress Local Co-Chair RAN'22* 

#### Dr. Josef Jampilek

Congress Co-Chair and Proceedings Editor RAN'22

#### Dr. Manuel Bañobre-López

Congress Local Co-Chair RAN'22

## **ABOUT RAN 2022**

RAN is aimed to become one of the leading international annual congresses in the field of nanotechnology.

This congress will provide excellent opportunities to the scientists, researchers, industrial engineers, and university students to present their research achievements and to develop new collaborations and partnerships with experts in the field.

There are 2 conferences included in the RAN Congress:

ICNNFC'22 - 7<sup>th</sup> International Conference on Nanomaterials, Nanodevices, Fabrication and Characterization

NDDTE'22 - 7<sup>th</sup> International Conference on Nanomedicine, Drug Delivery, and Tissue Engineering

While each conference consists of an individual and separate theme, the 2 conferences share considerable overlap, which prompted the organization of this congress. The goal of this undertaking is to bring together experts in each of the specialized fields, and at the same time allow for cross pollinations and sharing of ideas from the other closely related research areas.

**RAN** is an acronym for **R**ecent **A**dvances in **N**anotechnology.

The proceedings is published in Ottawa, Canada.

- All papers were peer-reviewed
- The congress proceedings is published under an ISSN and ISBN number
- Each paper is assigned a unique DOI number by Crossref
- The conference proceedings is indexed by Scopus and Google Scholar
- The proceedings is permanently archived in Portico (one of the largest communitysupported digital archives in the world)







## **SCIENTIFIC COMMITTEE**

We would like to thank the following for accepting to act as a member of the Scientific Committee for the RAN 2022 Congress:

### Scientific Committee Members for ICNNFC'22

- Dr. Erik Díaz-Cervantes, Universidad de Guanajuato, Mexico
- Dr. Emeric Frejafon, BRGM, France
- Dr. Laura Fusco, University of Padua, Italy
- Dr. Byeong Hee Kim, Kangwon National University, Korea
- Dr. Antonio Vicente Herrera Herrera, Universidad de La Laguna, Spain
- Dr. Bilgin Kaftanoğlu, Atilim University, Turkey
- Dr. Dongyang Li, University of Alberta, Canada
- Dr. Arunima Nayak, Graphic Era University, India
- Dr. Alexandre Nominé, University of Lorraine, France
- Dr. Muhammad Maqbool, The University of Alabama at Birmingham, USA
- Dr. Effie Marcoulaki, National Centre for Scientific Research, Greece
- Dr. Regina Moreira, University of Santa Catarina, Brazil
- Dr. Ram Prasad, Mahatma Gandhi Central University, India
- Dr. Katya Simeonova, Bulgarian Academy of Sciences, Bulgaria
- Dr. Thirumany Sritharan, Nanyang Technological University, Singapore
- Dr. Hande Yondemli, Selcuk University, Turkey

### Scientific Committee Members for NDDTE'22

- Dr. Hasan Anwarul, University of Qatar, Qatar
- Dr. Seongtae Bae, University of South Carolina, USA
- Dr. Ahmed Elzoghby, Harvard University, USA
- Dr. Huile Gao, Sichuan University, China
- Dr. Todd Giorgio, Vanderbilt University, USA
- Dr. Jingjiao Guan, Florida State University, USA
- Dr. Alexandra Marques, University of Minho, Portugal
- Dr. Haishan Zeng, University of British Columbia, Canada
- Dr. Dejian Zhou, Leeds University, UK

## **KEYNOTE SPEAKERS**

The keynote information for the 7th World Congress on Recent Advances in Nanotechnology (RAN'22) is as follows:

### **Keynote Speakers**



Dr. Wolfgang Ensinger Technische Universität Darmstadt, Germany ICNNFC'22 Keynote Speaker



Dr. Philippe Knauth Aix Marseille Université, France ICNNFC'22 Keynote Speaker



Dr. Alexander Korsunsky University of Oxford, UK ICNNFC'22 Keynote Speaker



Dr. Iseult Lynch University of Birmingham, UK ICNNFC'22 Keynote Speaker



Dr. Josef Jampilek Comenius University, Slovakia NDDTE'22 Keynote Speaker



Dr. Moein Moghimi Newcastle University, UK NDDTE'22 Keynote Speaker

### **NDDTE'22 KEYNOTE SPEAKER**



Dr. Wolfgang Ensinger, Technische Universität
Darmstadt, Germany
Topic of Keynote: Ion Damage Tracks in Polymers
Fabrication of 1-Dimensional Nanostructures:
Nanochannels, Nanowires and Nanotubes

### **View Abstract**

### **Return to Top**

Wolfgang Ensinger studied chemistry and physics at the Universities in Karlsruhe and Heidelberg in Germany. He received his PhD in 1988 from Heidelberg University. Thereafter, he was a guest researcher at Osaka National Research Institute in Japan, lecturer at Institute of Solid State Physics at University Augsburg and professor of Analytical and Nuclear Chemistry at University of Marburg. Since 2004, he is a full professor of Material Analysis at Technical University of Darmstadt in Germany. His research topics include formation of thin films and nanostructures, including nanochannels, nanowires and nanotubes. He has authored/co-authored more than 200 peer-reviewed scientific publications.

### **ICNNFC'22 KEYNOTE SPEAKER**



# Dr. Philippe Knauth, University of Victoria, Canada

**Topic of Keynote:** Heteroatom-Doped Carbon Quantum Dots as Electrocatalysts for the Oxygen Reduction Reaction

### **View Abstract**

**Return to Top** 

Currently Professor of Materials Chemistry and Director of the Chemistry Department at Aix Marseille University. Obtained his PhD in Physical Chemistry (Dr. rer. nat., Saarland University) in 1987 and the Habilitation in Materials Science (Aix Marseille University) in 1996. Prior to becoming a Full Professor in 1999, hold different positions: post-doctoral fellow (CNRS, Centre de Thermodynamique et de Microcalorimétrie, 1987-1989), laboratory head at Bayer Co. (Pigments and Ceramics Division, 1989-1990) and CNRS researcher ("Chargé de Recherche", 1990-1999). Member of the Editorial Board of several international journals: "Journal of Electroceramics" (Springer), "Journal of Nanomaterials" (Hindawi), "Frontiers in Energy Research" and "Membranes" (MDPI). Société Chimique de France (SCF): Vice-President (2006-2010) and President (2010-2017) of the "Provence-Alpes-Cote d'Azur" regional section and member of the Administration Council (Board of Directors) of SCF (representing the regional sections 2012-2017).

IUPAC: National Representative 2015-2019 and Titular Member since 2019 (Division II: Inorganic Chemistry). Appointed visiting scholar at MIT in 1997-98 and 2013 and Invited professor at the National Institute of Materials Science (Tsukuba, Japan) in 2007 and 2010 and at the University of Rome Tor Vergata in 2009, 2011 and 2022.

Fellow of the French Chemical Society ("Membre Distingué") and recipient of the Grand Prix Franco-italien (SCF PACA/SCI Liguria-Piemonte-Valle d'Aosta, 2020), the IAAM Medal (International Association for the Advancement of Materials) 2018, the Silver Medal of the Warsaw University of Technology (2015) and the CNRS Bronze Medal (1994). Main research interests: solid state ionics and ionic conduction near interfaces, nanostructured materials for energy storage and conversion, polymer electrolytes for electrochemical energy technologies.

### **ICNNFC'22 KEYNOTE SPEAKER**



# Dr. Alexander Korsunsky, University of Oxford, UK

**Topic of Keynote:** Nanostructuration in Hydrogels and Electrospun Fibre Mats for Biomedical Applications

### **View Abstract**

### **Return to Top**

Professor Alexander Korsunsky is a world-leader in engineering microscopy of materials for optimisation of design, durability and performance. He leads the MBLEM lab (Multi-Beam Laboratory for Engineering Microscopy) at Oxford, and the Centre for In situ Processing Science (CIPS) at the Research Complex, Harwell. He consults Rolls-Royce plc on matters of residual stress and structural integrity, and is Editor-in-Chief of Materials & Design, a major Elsevier journal (2018 impact factor 5.770).

Alexander holds the degree of Doctor of Philosophy (DPhil) from Merton College, Oxford. He was Junior Research Fellow at Fitzwilliam College, Cambridge, and Lecturer at Newcastle University, before returning to Oxford. Each year he gives several keynote and plenary lectures at major international conferences. He has extensive links that include visiting appointments in Italy (Roma Tre), France (ENSICAEN) and Singapore (NUS, NTU, A\*Star).

Prof Korsunsky's research interests concern improved understanding of integrity and reliability of engineered and natural structures and systems, from highperformance metallic alloys to polycrystalline ceramics to natural hard tissue such as human dentin and seashell nacre. He co-authored books on fracture mechanics (Springer), elasticity (CUP) residual stress (Elsevier), and published ~350 papers in scholarly periodicals on subjects ranging from multi-modal microscopy, neutron and synchrotron X-ray analysis, contact mechanics and structural integrity to micro-cantilever bio-sensors, size effects and scaling transitions. His h-index is 38, with his top publications cited over 500 times.

### **ICNNFC'22 KEYNOTE SPEAKER**



### Dr. Iseult Lynch, University of Birmingham, UK

**Topic of Keynote:** The Role of the Biomolecule Corona in Determining Biocompatibility of Nanoscale Materials

### **View Abstract**

**Return to Top** 

Professor Iseult Lynch undertook her PhD in Physical Chemistry at University College Dublin developing responsive polymeric materials for use in medical devices and as tissue growth substrates. She subsequently did several years of postdoctoral research at Physical Chemistry 1, Lund University in Sweden, including as an EU Marie Curie Fellow, investigating several aspects of colloid and interface science and biophysics. She returned to University College Dublin in 2006 where she led the nanoparticle synthesis and bio-characterisation group at the Centre for BioNano Interactions (CBNI). She then became the Strategic Research Manager for CBNI, and was instrumental in securing multiple large scale national and EU funding bids. In March 2013 she joined the University of Birmingham as a Lecturer in Environmental Nanosciences, becoming Senior Lecturer in 2015 and Professor of Environmental Nanosciences in 2016.

### **NDDTE'22 KEYNOTE SPEAKER**



### Dr. Josef Jampilek, Comenius University, Slovakia

**Topic of Keynote:** Nanoscale Antimycotics and Antifungal Active Nanocomposites

### **View Abstract**

**Return to Top** 

Josef Jampilek completed his Ph.D. degree in Medicinal Chemistry at the Faculty of Pharmacy of the Charles University (Czech Republic) in 2004. In 2004-2011, he worked in expert and managerial posts in the R&D Division of the pharmaceutical company Zentiva (Czech Republic). Prof. Jampilek deepened his professional knowledge at the Medicinal Chemistry Institute of the Heidelberg University (Germany) and at multiple specialized courses. In 2017, he was designated as a Full Professor of Medicinal Chemistry. At present he works at the Regional Centre of Advanced Technologies and Materials, Palacky University in Olomouc (Czech Republic) and the Faculty of Natural Sciences, Comenius University in Bratislava (Slovakia). In addition, he is a visiting professor at the University of Silesia in Katowice (Poland) and Hong Kong Baptist University (Hong Kong SAR, China) and an invited professor/expert at various higher educational institutions. He is an author/co-author of more than 30 patents/patent applications, more than 200 peer-reviewed scientific publications, 7 university textbooks, more than 30 chapters in monographs, and many invited lectures at international conferences and workshops. He also received several awards for his scientific results, e.g., from Aventis, Elsevier, Willey, Sanofi and FDA. The research interests of Prof. Jampilek include design, synthesis, and structure-activity relationships of heterocyclic compounds as anti-invasive and anti-inflammatory agents as well as nanosystems. He is also interested in ADME, drug bioavailability and solid-state pharmaceutical analysis.

### **NDDTE'22 KEYNOTE SPEAKER**



### Dr. Moein Moghimi, Newcastle University, UK

**Topic of Keynote:** Advances in Nucleic Acid Medicine Delivery to the Brain

### **View Abstract**

**Return to Top** 

Moghimi is widely recognised for his contribution to fundamental and translational research in nanomedicine and drug delivery, especially in mechanistic understanding of nanoparticle-mediated complement activation and infusion reactions, and as an inventor of many nanosystems for tissue-specific The latter have included "splenotropic" and "lymphotropic" targeting. nanoparticles. Among the latest inventions of Moghimi's laboratory are the NanoLigand Carriers. These are induced self-assemblies of phage-derived display peptides that on intravenous injection rapidly target two receptors on the blood brain-barrier, reaching neurons and microglia. A 2021 study by Stanford University list Moghimi among the top 0.08% of world's leading scientists across in all fields, and rank him at 53 (out of 131,063) in the field of pharmacology in the world and 28 in Europe. As to date, Moghimi's research programme has secured over €25 million funding. He is widely published (>300 research papers, reviews, book chapters, proceedings, etc., ORCID: 0000-0003-0836-926X) and cited (>24,000 citations and h-index of 70, GS as of Jan 2022), and has delivered >400 invited plenaries, keynote speeches and distinguished lectures world-wide. He also serves on editorial board of >10 international journals including Advanced Drug Delivery Reviews, Journal of Controlled Release and Nanomedicine (Lond.). He is also an active consultant to industry and governmental organisations.

The following papers were presented at the 7th World Congress on Recent Advances in Nanotechnology (RAN'22).

### Nanotechnology and Drug Delivery

**Title:** <u>Design and Evaluation of Nanocarrier Embedded Hybrid Hydrogels for</u> <u>Topical Delivery of Hydrophobic Molecules</u>

Author: Reatul Karim, Farhana Rizwan, Md. Mahbubur Rahman Tanim, Sabrin Islam Khan

**Title:** <u>Alginic Aldehyde-Gelatin Nanogel as Sustainable Drug Delivery System of</u> <u>Azithromycin: Development, Characterization and In Vitro Evaluation</u>

Author: Samin A. Dastjerd, Melike Sessevmez, Erdal Cevherand Gülhayat Nasun-Saygılı

Title: <u>Solid Lipid Nanoparticles for Ocular Delivery of Posaconazole: Design,</u> <u>Optimization and Evaluation</u>

Author: Ali Asram Sagiroglu

**Title:** <u>Development of a Long-Acting Injectable Formulation of Rilpivirine Based</u> <u>On PLGA Microspheres</u>

**Author:** Yulia Ulianova, Yulia Ermolenko, Vladimir Trukhan, Vladimir Ivanov, Ildar Iusupov, Alexander Kurkin, Svetlana Gelperina

**Title:** <u>Development FAP-Targeted Nanotherapy against Cancer-Associated</u> <u>Fibroblasts</u>

**Author:** Arianna Bonizzi, Marta Truffi, Leopoldo Sitia, Serena Mazzucchelli1, Sara Negri, Luca Sorrentino, Marta Sevieri and Fabio Corsi

Title: <u>Study of Chitosan-Arginine with Different Degrees of Substitution at</u> <u>Chitosomes Nanoparticles Formulation for Gene Delivery</u> **Author:** Bianca Bonetto Moreno Garcia, Omar Mertins, Sang Won Han



### Nanotechnology and Drug Delivery

Title: <u>Cellulose Nanocrystals as a Versatile Platform for Regulation of Myeloid</u> <u>Cell Immunogenicity</u>

**Author:** Sergej Tomić, Marina Bekić, Miloš Vasiljević, Dušica Stojanović, Dragana Vučević, Petar Uskoković, Miodrag Čolić and Vanja Kokol

**Title:** <u>Surface Plasmon Resonance Imaging For the Characterization of Dual-</u> <u>Targeting-Peptides Liposomes</u>

**Author:** Francesca Rodà, Silvia Picciolini, Alice Gualerzi, Valentina Mangolini, Francesca Re, Antonio Renda, Antonia Antoniou, Pierfausto Seneci, Sara Pellegrino, Marzia Bedoni

**Title:** <u>Raman Spectroscopy for the Characterization of Multifunctional</u> Nanoliposomes for Alzheimer's disease and Glioblastoma

**Author:** Valentina Mangolini, Silvia Picciolini, Francesca Rodà, Alice Gualerzi, Francesca Re, Antonia Antoniou, Sabrina Giofrè, Marzia Bedon

Title: <u>PBPK Modelling for Intratumoral Biodistribution of Magnetic Iron Oxide</u> <u>Nanoparticles</u>

Author: Doaa Ahmed Mohamed, Alice Howarth, Ibane Abasolo, Maiara Montanha, Monserrat Llaguno, Paul Southern, Quentin Pankurst, Zamira V. Díaz-Riascos, Neill Liptrott

**Title:** <u>Comparing in vitro Permeability of a Nanocarrier-Hydrogel Hybrid System</u> with an Alcoholic Hydrogel for Sustained Transdermal Drug Delivery

Author: Reatul Karim, Farhana Rizwan, Md. Mahbubur Rahman Tanim, Sabrin Islam Khan

### **Nanomaterials Application**

Title: <u>Aggregation-Induced Changes in Optical Characteristics of CdSe/ZnS</u> <u>Quantum Dots</u>

Author: Tatiana Oskolkova, Ekaterina Kolesova, Anna Orlova

Title: <u>Green Synthesis, Mechanism, & Intrinsic Properties of Kraft Lignin</u> <u>Nanoparticles</u>

Author: Ahilan Manisekaran, Patrick Grysan, Benoît duez, Damien Lenoble, and Jean-Sébastien Thomann

**Title:** <u>Exotemplate-based Fabrication of 1-dimensional Hybrid Nanostructures</u> for Catalysis and Sensing

Author: Khaled M. Amin, Tim Boettcher, Martin C. Scheuerlein, Wolfgang Ensinger

**Title:** <u>Responsive Nanoparticles for Triggered Delivery of Anti-scar Drug to the</u> <u>Burn Wound</u>

Author: Farinaz Jonidi Shariatzadeh, Sarvesh Logsetty and Song Liu

Title: <u>Development of Room-Temperature H2S Gas Sensor Using Flower-Like Zno</u> <u>Nanorods</u>

Author: Sara Ghaderahmadi, Nishat Tasnim, Mohammad Arjmand, Mina Hoorfar

Title: <u>Double Layer Graphene Oxide Loaded With Propylammonium Nitrate for</u> <u>Selective Adsorption of Inorganic Salts</u>

Author: H. AbuKhalifeh, I. M. AlNashef, B. Zhuman, I. Zuburtikudis

### **Thin Films**

Title: <u>Statistical Distribution of Charge Carriers in β-HgS Quantized Layer in</u> <u>Lateral Electrostatic Field</u>

Author: Volodya Harutyunyan

Title: <u>Hydrothermal growth: Influence of process parameters to design TiO2</u> <u>nanostructures</u> Author: Walid Mnasri, Sébastien Péralta, Xavier Sallenave

### Nanotechnology: Modeling and Simulation

Title: In Silico Characterization of Nanomaterials Author: Anais Colibaba, Konstantinos Kotsis, Vladimir Lobaskin

Title: <u>Hamaker Constants for Bionano Interactions in Water</u> Author: Konstantinos Kotsis, Vladimir Lobaskin

Title: <u>Multi-Scale Modelling Of the Formation of the Nanoparticle-Protein</u> <u>Corona</u>

**Author:** Ian Rouse, David Power, Stefano Poggio, Erik Brandt, Hender Lopez, Alexander Lyubartsev, Vladimir Lobaskin

Title: <u>Multiscale Modelling of Milk Protein Interaction With Iron and Aluminum</u> <u>Surfaces</u>

Author: Parinaz Mosaddeghi Amini, Julia Subbotina, Vladimir Lobaskin

### **Detecting and Monitoring of Nanomaterials**

Title: Indocyanine Green-Loaded Ferritin Nanoparticles for Intraoperative Detection of Cancer Tissue

Author: Marta Sevieri, Serena Mazzucchelli, Arianna Chesi, Cristina Sottani, Fabio Corsi

**Title:** <u>Selective Detection of Natural Gas Odorants Using Microfluidic Gas</u> <u>Sensors with Embedded Micro- and Nanofeatures</u>

Author: Mahan Ghazi, Nishat Tasnim, Mina Hoorfar

### Nanocomposites

**Title:** Optical Properties of Al<sub>2</sub>O<sub>3</sub>-Ni-Al Nano-Composite Films Author: Yoo Su Kang, Woong Ki Jang, Young Ho Seo, Byeong Hee Kim

Title: <u>Fabrication of nanoporous hemi-spherical micro-shell array for 3D cell culture</u> Author: Byeong Hee Tae, Eui Don Han, Byeong Hee

**Title:** <u>Self-supported LDH-decorated Nanotube Networks as 3D Platforms for</u> <u>Electrochemical Applications</u>

Author: Khaled M. Amin, Wolfgang Ensinger

**Title:** <u>Influence of Diatomaceous Biosilica on the Properties of Composites Based</u> <u>On Dielectric Elastomers</u>

**Author:** Weronika Brzozowska, Izabela Wojtczak, Myroslav Sprynskyy, Ewa Olewnik-Kruszkowska, Bogusław Buszewski

Title: On the Importance of Mucin Corona to prevent Nanocapsules Aggregation for Oral Delivery

**Author:** Mar Collado-González, Gurmeet Kaur, Yadira González-Espinosa, Rebecca Brooks, and Francisco M Goycooleai

Title: <u>New Consideration in Achievement of (Bio) Colloid Nanocomposites</u> Author: Railean Viorica, Anna Król-Górniak, Pomastowski Pawel, Buszewski Boguslaw

### Nanotechnology and Biomedical Applications

Title: <u>Functionalizing Gold Nanostars with Ninhydrin as Vehicle Molecule for</u> <u>Biomedical Applications</u>

Author: Swati Mishra

Title: <u>Nanobody Based Nanosystems to Contend Neisseria meningitidis and</u> West Nile Virus

**Author:** Amod Kulkarni, Jana Hruškovicová, Katarína Bhide, Patrícia Mertinková, Evelína Mochnáčová, and Mangesh Bhide

Title: <u>Adhesion, Viability and Differentiation of Adipose Tissue Derived</u> <u>Mesenchymal Stem Cells onto Micro/Nanostructured Polystyrene Substrates</u>

**Author:** Anastasia Kanioura, Angelos Zeniou, Panagiota Petrou, Adamantia Papadopoulou, Eleni Mavrogonatou, Dimitris Kletsas, Angeliki Tserepi, Evangelos Gogolides, Sotirios Kakabakos

Title: <u>Biobased Elastomer Nanofibers for Guiding Skeletal Muscle Regeneration</u> Author: Aimee Cheesbrough, Ivo Lieberam, Wenhui Son

## **SPONSORS**

International ASET Inc. would like to thank the following sponsors for their support of RAN 2022:











## **JOURNAL PUBLICATION**

Selected articles from the congress will be published in the following journal after a secondary review process:

IJTAN - International Journal of Theoretical and Applied Nanotechnology

### The publication fee will be waived for papers that win the Best Paper Award. Other attendees will receive a 25% discount towards the publication fee of the journal.

This journal has adopted to the open-access model, meaning all free access to the journal's articles and content with no need for subscription. This ensures larger audience and therefore higher citations.

Users are allowed to read, download, copy, distribute, print, search, or link to the full texts of the articles in this journal without asking prior permission from the publisher or the author. This is in accordance with the BOAI definition of open access.

All published papers of IJTAN will be submitted to Google Scholar, Microsoft Academic Search, Open J-Gate, Mendeley, Index Copernicus International, Academic Index, Mendeley, Primo Central, and Genomics JournalSeek for possible indexing. Additionally, they will be permanently archived in Portico (one of the largest communitysupported digital archives in the world) and will be assigned unique DOIs.

## **RAN'23**

The 8<sup>th</sup> World Congress on Recent Advances in Nanotechnology (RAN'23) will be held on March 23 - 25, 2023 in Lisbon, Portugal.



For inquiries and to obtain further information on the congress, please visit the <u>website</u>

You can also email info@rancongress.com or call us

at: +1-613-834-9999



At International ASET Inc., we take matters that relate to ethics in publishing very seriously. We believe that the peer-review publication process is a vital building block of academia, and its integrity must be maintained at all costs, which is why every article will be peer-reviewed by several experts in the field. Under peer-review, experts in the related fields are required to provide opinions and comments on the improvements of the submissions.

We are pleased to announce that Avestia Publishing (a publisher of International ASET Inc.) has been approved by the <u>Committee on Publication Ethics (COPE)</u>. We are proud of our efforts towards abiding by the guidelines of ethics, integrity, and high standards in publishing.

Following are the ethics guidelines set by the organizers for the authors and the reviewers of the conference:

### **Scientific Committees**

Scientific committees consisting of experts in the fields are established. The committees oversee the peer-review and publication process. To see the scientific committee members, please follow the link: <u>Scientific Committee</u>

#### **Equality and Decisions**

One or more reviewer, scientific committee member, or chair, (internal or external), are responsible for evaluating the relevance of the submitted manuscripts to the proceedings, technical and scientific merit, originally, and impact. These evaluations are to be carried out regardless of ethnicity, religion, gender, sexual orientation, political beliefs, and institutions. Successive to peer-review, the Chair has full authority and is solely responsible for the published content and the process thereof.

#### Confidentiality

Scientific committee member(s) and publishing staff may not disclose manuscripts or their content, directly or indirectly, to anyone other than individuals invited to review the manuscript (whether they accept or not), other reviewers of the same publications, and publishing staff.

#### **Conflicts of Interest**

Scientific committee member(s) and publishing staff may not utilize the contents of submitted manuscripts whether accepted or rejected, directly or indirectly for their own research purposes without prior written consent by the authors.

#### **Reviewers**

### **Contribution to Decisions**

In order for final decisions to be made regarding acceptance or rejection of papers, we rely on peer-review. Peer-review is the process of experts in the field reading, understanding, and objectively commenting on submitted papers. Through peer-review, scholars give back to the academic and scientific community by helping the chair(s) make decisions regarding manuscripts.

#### Promptness

Reviewers should promptly notify the chair(s) if they are unable or unqualified to carry out their reviewing duties. Reviewers should do their best to provide the reviews to the chair(s) as promptly as possible, and within the designated time-frame.

#### Acknowledgment of Source

The reviewer should notify the chair(s) if they find any similarities in the paper being reviewed and any other work that has been published previously.

### Confidentiality

Reviewers must not share the contents of the manuscripts they receive for review, regardless of their decision to review or contents of the review, directly or indirectly, with anyone other than the person who has assigned the review.

#### Fairness

Reviewers should review manuscripts fairly and objectively, with supporting evidence or arguments, regardless of personal feelings or biases.

### Conflicts of Interest:

Invited reviewers should immediately inform the chair(s) in case of a conflict of interest based on competitive, collaborative, personal, family, and other relationships with the authors or people involved in the work.

### **Authors**

### **Reporting Standards**

The paper being submitted for the proceedings should be based on clear objective, discussion, and references. The findings, data, and the arguments being used in the paper should be accurate. It is author's responsibility to guarantee the authenticity of the data in the paper.

### Authorship

Only persons who have significantly contributed to the work and the manuscript can be named authors on a paper. These contributions include the idea/concept, design, experiments, evaluation, analysis, drafting or revision of the manuscript, and others. Authors must all have agreed to be named as such and for the manuscript to be submitted. Anyone who has contributed based on the above, but the level of contribution is not significant, may appear in the acknowledgement section of the manuscript.

### Acknowledgement of Source

Acknowledgement to other's work being used in the paper must be given at all times. Authors of the paper should give comprehensive credit where it is necessary, by citing the work, they use for supporting their own research.

### Accuracy, Originality, and Plagiarism

Authors should describe their work and the results of their work accurately and in full. The level of provided accuracy and detail should be such that a reader can replicate the work independently. Inaccurate, incomplete, fraudulent, and misleading statements are considered unacceptable and unethical. Direct or indirect use of other people's work is not allowed, unless properly cited. Previous works that have influenced the current work should also be cited. Presenting someone else's work as one's own is strictly prohibited and is considered plagiarism.

#### Data and Material

Authors are encouraged to share their data, software, or other sharable material online, provided copyright and ownership laws surrounding that particular project permit. Authors may also be asked to share such material with the chair(s), and/or reviewers, and must be willing to do so if asked.

#### **Dual Submissions**

Submitting a manuscript to more than one venue (conference, journal, etc) simultaneously is not allowed. Presenting previously published work to be considered as a new submission, without a significant new interpretation or analysis, is prohibited.

#### **Conflicts of Interest**

Authors must notify the chair(s) at the time of submission, if any factor outside the scope of the research has influenced any step of the work and manuscript writing. Examples of such factors include but are not limited to funding, grants, advisory and consultancy, stock ownership, current or past employment, and memberships, among others. All funding sources should be disclosed in the manuscript.

#### Animal and Human Subjects

Works involving human and/or animal subjects must ensure that the work has abided by institutional guidelines, and pre-approved by required bodies. Moreover, consent must be acquired from participants, and privacy of subjects must be ensured. All of the above must be specified with clear statements in the manuscript.

#### Hazardous Material

It should clearly be identified in the manuscripts if the works have involved hazardous chemicals and material, or devices that can be harmful.

#### Reporting of Mistakes, Errata, and Retractions

If an author identifies a major error in a published paper, he/she must immediately inform the publisher. Regardless of whether a significant error is reported by the authors of the work or other readers, authors are obligated to take the necessary steps to correct the issue. It is decided on a case-by-case basis whether an erratum will be submitted to notify future readers of the error and correction, or whether the paper will be retracted. Unethical/plagiarism issues mostly result in a retraction, while unintended mistakes will mostly result in the publication of an erratum.

### Publisher

#### Errata and Retractions

The publisher takes the necessary steps to prevent mistakes, academic and scientific misconduct, and unethical behavior, both intended and unintended. When mistakes are reported, the publisher works with chair(s) and authors to publish an erratum clarifying the issue. In cases where the mistakes are severe and significant, the paper might be retracted. If unethical behavior, plagiarism, academic and scientific misconduct, or other such activities are proven to have taken place by an author or authors, the publisher will retract the paper.

### **Content and Archiving**

The publisher preserves and stores all content digitally on their own servers, as well as through partnering with Portico (Digital Preservation and Electronic Archiving Service).

#### Copyright and Access:

The proceedings and related papers are all based on the open-access model, which means interested individuals and institutions can access the material for free.

Users are allowed to read, download, copy, distribute, print, search, or link to the full texts of the articles in this proceedings without asking prior permission from the publisher or the author. This is in accordance with the BOAI definition of open access.

#### **Ownership and Management:**

This conference-proceedings is managed and operated by the International ASET (International Academy of Science, Engineering, and Technology) and Avestia Publishing (the publishing arm of ASET).

#### Schedule:

This conference proceeding accompanies the conference, meaning a new proceedings will be published every year for the corresponding annual conference of this series.

## **CONTACT US**

The 7<sup>th</sup> World Congress on Recent Advances in Nanotechnology (RAN'22) consist of 2 conferences. You can contact each conference using the information below.

IC NNFC <sup>22</sup>	6th International Conference on Nanomaterials, Nanodevices, Fabrication and Characterization Email: <u>info@icnnfc.com</u> Website: <u>https://lisbon2022.icnnfc.com</u>
NDDTE '22	6 <sup>th</sup> International Conference on Nanomedicine, Drug Delivery, and Tissue Engineering Email: <u>info@nddte.com</u> Website: <u>https://lisbon2022.nddte.com</u>

For inquiries and to obtain further information on the congress, please visit the <u>website</u>

You can also email info@rancongress.com or call us

at: +1-613-834-9999