

Preface

We welcomed you to the 2nd International Conference on Advance Materials Science (ICOAMS) 2019, held in 23-24 October 2019 in Universitas Muhammadiyah Surakarta. As a premier conference in the field, ICOAMS 2019 provided a highly competitive forum for reporting the latest developments in the research and application of material sciences. We were pleased to present the proceedings of the conference published in Material Science Forum.

Although it was only in second year, it had witnessed a significant growth. The authors of submitted papers came from different countries such as Russia, Turkey, Vietnam, China, Malaysia, and Indonesia.

This conference program represented the efforts of many people. We would like to express our gratitude to the invited speakers, Assoc. Prof. Ts. Dr. Hamimah Abd Rahman (Universiti Tun Hussein Onn Malaysia), for sharing her knowledge and insights with us. The paper submission and reviewing process was directly managed by the Scientific.net system.

We thank all the authors for their contributions and their participation in ICOAMS 2019. We feel honored and privileged to serve the best recent developments in the fields covered in ICOAMS.

Assoc. Prof. Dr. Waluyo Adi Siswanto
Universitas Muhammadiyah Surakarta, Indonesia
Chair Conference

Assoc. Prof. Dr. Tri Widodo Besar Riyadi
Universitas Muhammadiyah Surakarta, Indonesia
Co-Chair Conference

Committee

Conference Chairs:

Assoc. Prof. Dr. Waluyo Adi Siswanto,

Assoc. Prof. Dr. Tri Widodo Besar Riyadi

Track 1: Metallurgy and Materials Science

Track Director: Assoc. Prof. Dr. Tri Widodo Besar Riyadi

- Ferrous and non-ferrous metallurgy • mineral processing • hydrometallurgy • pyrometallurgy
- electrometallurgy • structure of materials • materials research and development.

Track 2: Nanomaterials and Nanotechnology

Track Director: Assoc. Prof. Dr. Supriyono

- Nanoparticles • coatings and thin films • inorganic-organic hybrids and composites • membranes • nano-alloys • quantum dots • self-assemblies • graphene • nanotubes • synthesis of organic, inorganic, and hybrid nanomaterials • characterization of mesoscopic properties • modelling of nanomaterials and/or mesoscopic effects • new application of nanomaterials.

Track 3: Characterization and Testing of Materials

Track Director: Assoc. Prof. Dr. Agus Dwi Anggono

- Destructive and non-destructive testings • mechanical and physical tests • metallography • failure analysis • corrosion resistance • chemical analysis • surface characterization and microanalysis of surfaces • features and fractures • industrial performance measurement • materials selection • general material design, characterization, and evaluation.

Track 4: Biomaterials, Energy materials and Advance Materials

Track Director: Dr. Muhammad Syukron

- Physical, biological and chemical sciences that underpin the design of biomaterials • polymer synthesis and characterization • drug and gene vector design • the biology of the host response • immunology and toxicology and self assembly at the nanoscale • implantable devices • bionanotechnology • tissue engineering • materials for energy (all aspects of thermal, renewable and nuclear power generation) • transmission and storage of the energy produced • development of materials with novel and/or useful optical, electrical, magnetic, catalytic, and mechanical properties.

Track 5: Computational Materials Science

Track Director: Mr. Agung Setyo Darmawan

- obtaining new or enhanced insights into material behavior, properties and phenomena • predicting structure-property relationships for new materials in conjunction with data informatics • novel capabilities of computational tools, technical software and shareware, or cyberinfrastructures • application of modern computational methods alone or in conjunction with experimental techniques to investigate existing inorganic and organic materials as well as to discover new materials.

Venue

Lecture Hall 5th floor, Gedung Pascasarjana, Sekolah Pascasarjana,

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