

Editorial – Special Issue on Advances in Materials and Processing Technologies – AMPT 2022

The Advances in Materials and Processing Technologies (AMPT) international conference series was founded in 1990 at the Dublin City University, Dublin, Ireland, and since then has been held in many different countries around the globe. The conference provides a forum for academics, researchers, and practicing engineers. It aims to bring them together to meet, exchange and share their experiences, research results, information and ideas on all aspects of materials and processing technologies. It also provides a premier interdisciplinary platform to present and discuss the most recent innovations, trends, and concerns as well as practical challenges encountered and solutions adopted in this field. After being cancelled in 2020 due to the COVID pandemic, during 10–14 October 2022, for the first time, the AMPT conference was held along the beautiful Adriatic–Mediterranean coast of Slovenia in Portorož, located in the municipality of the historical Venetian-style town of Piran. The conference was attended by more than 100 participants from 19 countries, supported by 5 sponsors and exhibitors and during the course of the conference scientific results were provided in the form of 5 invited talks, 60 oral presentations and 15 posters. This is a remarkable number, taking into account the circumstances and pandemic travel restrictions still in place in certain parts of the world.

The topics covered by the presentations given at AMPT 2022 included:

- Forming processes; Bulk forming, Rolling, Stamping, Fine Blanking, Net-Shape Forming, Hydroforming, Casting and Welding, Forming in Near Melt Condition.
- Machining processes; Cutting, Grinding and Polishing, Abrasive Machining, EDM Machining, Non-Conventional Machining.
- Precision Engineering and Metrology; Surface Measurement and Characterization, In-process and On-line Measurement, Microscopy.
- Micro/Nano Technology; MEMS Device and System Design, Micro Forming, Nano materials, Biomimetic, Carbon-Based Materials.
- Materials Science and Processing; Smart Materials, Biomaterials, Functional and Flexible Materials,

HEA, Materials for High-Temperature Applications, Metals, Ceramics, Light-Weight Materials, Polymers, Composites, Timber, Renewable Materials.

- Heat treatment and Surface Engineering; Heat and thermo-chemical treatments, PVD & CVD Coatings, Thermal Spray Coatings, Surface Modification, High-Energy-Beam Processing, Tribology.
- Additive Manufacturing; Powder Technology, 3D metal printing, Process Control, Design, Printing and Heat Treatment.
- Modelling and Simulation; Computer Aided Engineering, Modelling, Simulation, Sensors design, Big Data, Cloud Computing.
- Smart Manufacturing and Management; Industry 4.0, Quality and Reliability, Green Manufacturing, Sustainable Manufacturing, Recycling, Biocompatibility and Biodegradability.

This Special Issue on AMPT 2022 includes 7 selected papers presented at the 23rd International Conference on Advances in Materials and Processing Technologies, focusing on a variety of problems related to topics of Materials and Processing Technologies.

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