

### 2021 IEEE 16th Nanotechnology Materials and Devices Conference (NMDC) Welcome from the General Chairs

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## 2021 IEEE 16th Nanotechnology Materials and Devices Conference (NMDC) Welcome from the General Chairs

Dear Colleague,

On behalf of the IEEE Nanotechnology Council (IEEE NTC) and the Conference Organizing Committee, it is our pleasure to welcome all authors, reviewers, session chairs, and participants to the 16<sup>th</sup> IEEE Nanotechnology Materials and Devices Conference (IEEE NMDC) in Vancouver, BC, Canada, in December 12 - 15, 2021. The IEEE NMDC was founded in 2005 and since that time it has developed as one of the major IEEE conferences in the rapidly growing field of Nanotechnology fundamental research and applications. The IEEE NMDC is held annually on a rotational principle in different locations in IEEE Regions 1-7 & 9 (North & South America), Region 8 (Europe & Africa) and Region 10 (Asia & Pacific), with the latest editions taking place in Anchorage, AK, USA (2015), Toulouse, France (2016), Singapore (2017), Portland, OR, USA (2018), Stockholm, Sweden (2019) and Nanjing, China (2020, virtually due to the COVID-19 pandemic).

IEEE NMDC aims to develop critical assessment of existing work and future directions in nanotechnology research including nanomaterials and fabrications, nanoelectronics, nanophotonics, nanobio medical applications, devices, and integration. Its main purpose is to foster communication between physicists, chemists, microbiologists and engineers from academia and industry, interested in nanodevices and nanostructured materials, advanced preparation techniques, new material properties, standards and safety issues of nanotechnology, computer simulations and theoretical developments. The interdisciplinary exchange between academic scientists and contributions from industrial researchers, during the conference, stimulates gathering knowledge and helps inspiring new perspectives in applications on this exciting area.

IEEE NMDC 2021 is primarily sponsored by the IEEE Nanotechnology Council. Valued patrons of the conference are NC State University (NC, USA), University of Victoria (BC, Canada), CMC Microsystems (Canada), Biosensors and Micromachines by MDPI, as well as the conference media partners: IEEE TNANO, IEEE OJ-NANO and IEEE Nanotechnology Magazine.

The 16<sup>th</sup> IEEE NMDC 2021 has a particular flavor since for the first time one of the main IEEE NTC conferences is organized in co-location with one of the oldest IEEE conferences, namely the 96<sup>th</sup> IEEE Conference on Electrical Insulation and Dielectric phenomena (IEEE CEIDP 2021) of the IEEE Dielectrics and Electrical Insulation Society (IEEE DEIS). Given the challenges imposed by the pandemic of our time, COVID-19, the NMDC & CEIDP organizing committees succeeded to work in concert, in the effort to offer the conference attendees many parallel sessions, covering an enlarged panel of scientific topics and their industrial applications, organized in an excellent environment offered by the Pinnacle Harbourfront Hotel, located in the heart of Vancouver. Conference attendees that experience travel

restrictions in this difficult time will be given the possibility to remotely present their contributions. Apart from the possibility of the registered participants to freely access the contributions and sessions of both conferences, they are highly encouraged to attend the NMDC & CEIDP two joint sessions and the joint workshop dedicated to topics of common interest.

The IEEE NMDC 2021 would not be successful without the commitment and contribution from many volunteers, authors, reviewers, conference participants, and partners. All are highly acknowledged for their help and support.

We wish you a productive and interesting conference and an agreeable time in Vancouver.

IEEE NMDC 2021 General Chairs

Dr. Kremena MAKASHEVA CNRS, LAPLACE







Prof. Reuven GORDON University of Victoria



Prof. James B. SPICER Johns Hopkins University



# NMDC 2021

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