

Preliminary Program

(February 16, 2024)

Nanotechnology Convergence for Sustainable Energy, Environment, Climate Change and Health: A US-Africa Conference

July 14-18, 2024

Casablanca, Morocco

Conference Chairs:

**Isabel Escobar, University of Kentucky
Ahmed El-Gendy, University of Texas-El Paso**



Engineering Conferences International

369 Lexington Avenue, 3rd Floor #389

New York, NY 10017, USA

www.engconfintl.org – info@engconfintl.org

Sunday, July 14, 2024

17:00 – 19:00	Conference check-in
19:00 – 19:15	Opening and Welcome (Conference co-chairs)
19:15 – 21:00	Dinner

Monday, July 15, 2024

Breakfast

Morning

Plenary Talk

Nanotechnology foundation for emerging science and technology

Mihail Roco, Senior advisor for Science and Engineering, National Science Foundation, USA

Coffee Break

Session 1: Nano-Environment 1

This session will cover water treatment, crop technology, and waste water treatment for agricultural activities.

Lunch

Afternoon

Session 2: Nano-Energy 1

This session will cover quantum computing, energy harvesting, sustainability, data storage including nanoelectronics, nanophotonics and nano-optoelectronics.

Coffee Break

Session 3: Nano-Medicine 1

This session will cover medical applications such as MRI diagnosis, biosensors, bioinformatics, drug delivery, cancer treatment including hyperthermia, gene-, chemo-, and radio-therapies.

Free time / set up posters

Evening

Dinner

Poster Session and Social Hour

Tuesday, July 16, 2024

Breakfast

Morning

Plenary Talk

Overview of the NSF ENG/CBET Division: Core Programs and Convergence Research Opportunities

Nora Savage, National Science Foundation, USA

Coffee Break

Session 4: Nano-Environment 2

This session will cover food security, PFAS removal, nano-packaging, water safety and policies.

Lunch

Afternoon

Session 5: Nano-Energy 2

This session will cover nanomaterials for energy applications such as MXenes, graphene, magnetocaloric, exchange bias, Qubit, and topological insulators.

Coffee Break

Session 6: Nano-Medicine 2

This session will cover biophotonics, biofilms, bio-channels, and computational biomaterials.

Free time / set up posters

Evening

Dinner

Poster Session and Social Hour

Wednesday, July 17, 2024

Breakfast

Conference Excursion

Dinner in Casablanca

Thursday, July 18, 2024

Breakfast

Morning

Session 7: Climate Change

This session will cover global warming, CO2 reduction, hydrogen storage, atmosphere protection and policies.

Coffee Break

Session 8: Nano-Metrology, Modeling and Simulation

This session will cover nano-characterization and accuracy techniques, nano measurement uncertainty, nano-safety, theoretical modeling and simulation of nanomaterials.

Closing Remarks and Poster Awards

Lunch

Departures