

Poster Abstracts

Day 1

- 1. Big data in materials science: Application to energy storage materials**
Donald Siegel, University of Michigan, United States
- 2. Novel synthesis of nanofiltration hollow fiber membranes for toxic metal removal from wastewater**
Ramia Albakain, The University of Jordan, Jordan
- 3. Compounding impacts of human-induced water stress and climate change in the MENA region**
Amir AghaKouchak, University of California, Irvine, United States
- 4. Big Data: Exploring the challenges and opportunities for Kuwait's healthcare system**
Dari Alhuwail, Kuwait University, Kuwait
- 5. Open water data and Alto optimize water resources management and aquatic ecosystem restoration**
Mark Tompkins, FlowWest, LLC, United States
- 6. Bacterial contamination & mutagenicity of Malva parviflora grown side of Zarqa river in Jordan**
Nisreen AL-Quraan, Jordan University of Science and Technology, Jordan
- 7. Climate change impacts on the built environment**
Simi Hoque, Drexel University, United States
- 8. Integrated coastal zone management for the state of Kuwait: A conceptual framework**
Alanoud Al-Ragum, Kuwait Institute for Scientific Research, Kuwait
- 9. Desalination of high-salinity brines: Novel energy-efficient technologies**
Ngai Yin Yip, Columbia University, United States
- 10. Alternative approaches for controlling microbes: Light, nano and beyond.**
Rehab Amin, Cairo University, Egypt
- 11. Automated design and fabrication of customized biomedical devices**
Paul Egan, Texas Tech University, United States
- 12. Hamiltonicity in complex networks**
Milica Andelic, Kuwait University, Kuwait
- 13. Lessons learned from the microbiome**
Sammy Datwani, Labcyte, United States
- 14. IoT and big data technologies for occupancy detection in smart buildings**
Mohamed Bakhouya, International University of Rabat, Morocco

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15. Innovative distributed electrochemical generators for next generation buildings and infrastructure
Whitney Goldsborough Colella, Gaia Energy Research Institute, United States

16. Approaches to achieve sustainable groundwater management in the southern shore of the Mediterranean
Adel Zghibi, University Tunis El Manar, Tunisia

17. Earth observations addressing key challenges
Hesham El-Askary, Chapman University, United States

18. Tailoring the mechanics of origami to enable large-scale deployable and adaptable infrastructure
Evgueni Filipov, University of Michigan, United States

19. Vacuolar sugar transporter identification in *Agave americana marginata*
Dalal Albaijan, Kuwait Institute For Scientific Research, Kuwait

20. Computational modeling to guide air quality research and environmental policy
Fernando Garcia Menendez, North Carolina State University, United States

21. Adsorption of heavy metals and methylene blue from wastewater onto silica alumina geopolymers
Malyuba Abu-Daabes, Australian College of Kuwait, Kuwait

22. Engineering advanced water purification membranes using fundamental structure/property relationships
Geoffrey Geise, University of Virginia, United States

23. GIS based method for the characterization of atmospheric dust particles
Amin Nawahda, Palestine Technical University - Kadoorie, Palestine

24. Use of ultra high-performance concrete and copper-based superelastic alloys in columns
Esref Gencturk, University of Southern California, United States

25. Applying data and systems analysis to risk-based decision making
Ellie Graeden, Talus Analytics, United States

26. Airborne dust microbiome in Kuwait
Nazima Habibi, Kuwait Institute for Scientific Research, Kuwait

27. Safeguarding water infrastructure from heavy metal contaminants using novel electrochemical sensors
Rohan Akolkar, Case Western Reserve University, United States

28. Managing environmental big data : Using apache spark for water and air quality data
Hicham Hajji, IAV Institute, Morocco

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29. Dust Storms in the southwestern United States: Health impacts and meteorological predictors
James Crooks, Colorado School of Public Health, United States

30. Nano-microbial sensors for rapid capture and detection of pathogens
Rabeay Hassan, Zewail City For Science And Technology, Egypt

31. Structural engineering with rocks and string
Douglas Holmes, Boston University, United States

32. The impact of different types of filters on the quality of drinking water in the state of Kuwait
Abdalrahman Alsulaili, Kuwait University, Kuwait

33. Scaling up micro- and nano-fluidics for disease diagnostics and drug manufacturing
David Issadore, University of Pennsylvania, United States

34. Smart city testbed for cybersecurity research
Michail Maniatakos, New York University Abu Dhabi, United Arab Emirates

Day 2

35. The Enve-Omics Lab: At the interface of microbial ecology with engineering and bioinformatics.
Kostas Konstantinidis, Georgia Institute of Technology, United States

36. Infrastructure management in Kuwait: Shuwaikh Port as a case study
Sharaf AlKheder, Kuwait University, Kuwait

37. Effects intermittent operation of piped water distribution systems on water quality
Emily Kumpel, University of Massachusetts Amherst, United States

38. Photocatalytic oxidation of volatile organic compounds for indoor air purification
Moursi Abu Bieh, Egyptian National Research Center, Egypt

39. Harnessing water chemistry to address complex water challenges for a thirsty world
Haizhou Liu, University of California, Riverside, United States

40. Environmental radioactivity in food and air
Tareq Alrefae, Kuwait University, Kuwait

41. Designing microbial consortia with defined social interactions
Ting Lu, University of Illinois at Urbana-Champaign, United States

42. Modal analysis of cancer metastasis
Bridget Martinez, Los Alamos National Laboratory, United States

43. Spatiotemporal analysis of the Nile river microbial diversity along the Cairo metropolis
Aymen Yassin, Cairo University, Egypt

44. Hyperloop: Infrastructure security implications of the revolutionary transportation mode
Mostafa Mobasher, Thornton Tomasetti, United States

45. The co-occurrence of extreme ozone and hot temperature events and impact of the general circulation
Kenza Khomsi, Hassan II University, Morocco

46. Climate model shows large-scale wind and solar farms in the Sahara increase rain and vegetation
Safa Motesharrei, University of Maryland, United States

47. Next generation functional organic materials for environmental remediation
Lei Fang, Texas A&M University, United States

48. Interaction between host genome and gut microbiome in inflammatory bowel disease
Ahmed Moustafa, American University in Cairo, Egypt

49. Air quality insight from open source data: OpenAirLocal
Richard Peltier, University of Massachusetts Amherst, United States

50. Small-scale spatio-temporal statistical mapping of criteria air pollutants in Kuwait
Alanood Alkhaled, Kuwait University, Kuwait

51. Wireless sensors for monitoring pharmaceutical lyophilization
Dimitrios Peroulis, Purdue University, United States

52. Geomatics for delineation of groundwater potential zones in Medjerda watershed, Tunisia
Fatma Trabelsi, University of Jendouba, Tunisia

53. Data Adsorption of oxyanions on ferrihydrite studied by flow microcalorimetry and computational chemistry
Nadine Kabengi, Georgia State University, United States

54. Assessing the genomic diversity and selection footprints on dromedary camels using full genome sequencing and genotyping-by-sequence approaches
Hussain Bahbahani, Kuwait University, Kuwait

55. Modulation of virulence in the skin microbiome by botanical natural products
Cassandra Quave, Emory University, United States

56. Multifunctional porous polycalix[n]arenes for efficient water purification
Dinesh Shetty, New York University Abu Dhabi, United Arab Emirates

57. Harnessing the cold of space as a renewable resource: Radiative sky cooling
Aaswath Raman, University of Pennsylvania, United States

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58. Exploring stochastic gene expression in the microbiome using biomimetic robots

Warren Ruder, University of Pittsburgh, United States

59. A new classification approach for big data security based on networks labeling

Sahel Alouneh, German Jordanian University, Jordan

60. Engineering human functions: Novel data analytics and instrumentation to alter swallowing and gait

Ervin Sejdic, University of Pittsburgh, United States

61. Effect of soil spatial variability on onshore and offshore foundations.

Mbarka Selmi, National Engineering School of Gabes, Tunisia

62. Bioinspired design of structural and thermal materials

Nima Rahbar, Worcester Polytechnic Institute, United States

63. Determination of radiation sterilization dose (RSD) of bio-hazards using omics data

Haitham Sghaier, National Center for Nuclear Sciences and Technology, Tunisia

64. Accelerating the discovery of new superhard materials via materials informatics

Taylor Sparks, University of Utah, United States

65. Seismic performance of structural reinforced concrete walls

Rafik Taleb, University of Blida 1, Algeria

66. Electrochemical nitrogen recovery from wastewater

William Tarpeh, Stanford University, United States

67. Gamma radiation induced degradation of some dyes in aqueous solutions

Haikel Jelassi, National Centre for Nuclear Sciences and Technologies, Tunisia

68. Microbial community engineering for clean water, renewable energy, and resource recovery

George Wells, Northwestern University, United States

69. Impact of infection and treatment on epigenetic profiles of malarial children in Burkina Faso

Dareen Almojil, New York University Abu Dhabi, United Arab Emirates