

Proceedings of the 2010 ESA Annual Meeting on Electrostatics
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University of North Carolina, Charlotte

General Chair: Prof. Maciej Noras, University of North Carolina, Charlotte
Technical Chair: Prof. Daniel J. Lacks, Case Western Reserve University

A. Atmospheric and Space Applications I

- A1. **G. T. Delory.** [Electrical Phenomena on the Moon and Mars](#)
- A2. **M. D. Hogue.** [Triboelectrification of Granular Matter as a Function of Particle Count](#)
- A3. **H. K. Lee.** [Evaluation of Odor Treatment for discharge plasma by using ceramic tube](#)
- A4. **N. Farnoosh, K. Adamiak, G. S. P. Castle.** [3-D Numerical Simulation of Particle Concentration Effect on a Single-Wire ESP Performance for Collecting Poly-dispersed Particles](#)

B. Materials Processing

- B1. **K. A. Forward, G. C. Rutledge.** [Free Surface Electrospinning](#)
- B2. **M. Nystrom, M. Murtomaa, J. Salonen.** [Fabrication of amorphous pharmaceutical materials by electrospaying into reduced pressure](#)
- B3. **A. Ieta, J. Primrose, D. Quill, M. Chirita, S. Allen.** [Electrospray Onset Study of Water-Ethanol Mixtures](#)

C. Materials I

- C1. **H. Berndt.** [Electrostatic discharge \(ESD\) -- Sources of electrostatic charges in a production line \(smt\)](#)
- C2. **A. R. Akande.** [The electrification of polymers by metals through repeated non-sliding and sliding mode of contact](#)
- C3. **S. Bian, C. J. Angamma, Shesha H. Jayaram.** [Use of Electrospinning to Improve the Dispersion of Inorganic Nanofillers in Silicone Rubber](#)
- C4. **R. Pham, K. M. Forward, R. C. Virnelson, R. M. Sankaran, D. J. Lacks.** [Triboelectric charging of identical materials by asymmetric rubbing](#)
- C5. **C. Dykstra, T. Salameh, I. Camarillo, F. Xiao, R. Sundararajan.** [Enhanced Doxorubicin Uptake in Malignant Breast Cells using Electrical Pulses](#)

D. Atmospheric and Space Applications II

- D1. **C. I. Calle, C.D. Immer, J. Ferreira, M.D. Hogue, A. Chen, C.R. Buhler, S.J. Snyder, N. Vansuetendael.** [Integration of the Electrodynamical Dust Shield on a Lunar Habitat Demonstration Unit](#)
- D3. **L. Dascalescu, M. Plopeanu, B. Tabti, A. Antoniu, L.-M. Dumitran, P. V. Notingher.** [Corona Charging of Composite Non-Woven Media for Air Filtration](#)
- D4. **D. Patel, L. Zhao.** [Active Disturbance Rejection Control of Doubly-Fed Induction Generator during Voltage Dip](#)

F. Liquids and flows

- F1. **F. Kremer, A. Serghei, J. R. Sangoro, M. Treb, E. U. Mapesa.** [Broadband Dielectric Spectroscopy in Nano-\(Bio\)-Physics](#)
- F2. **P. Cervenka, J. Hrdlicka, M. Pribyl, D. Snita.** [Study on Faradaic and Coulombic interactions at microelectrodes utilized in AC electroosmotic micropumps](#)
- F3. **J. Zhang, F. C. Lai.** [Effect of Emitting Electrode Number on the Performance of EHD Gad Pump in a Rectangular Channel](#)

F4. **R. Tirumala, D. B. Go.** [The Assisted Corona Discharge: Multi-Electrode Configurations and the Effects on EHD Flows](#)

G. Energy

G1. **E. R. Post, K. Waal.** [Electrostatic Power Harvesting in Textiles](#)

G2. **K. K Chedella, L. Zhao, Z. Zhang.** [Modeling of a Small Stand-Alone AC System with the Dynamic Models of Fuel Cells and Solar Panels](#)

G3. **M. Reznikov.** [Electrostatic Swing Energy Harvester](#)

G4. **K. Sakai.** [Electrostatic force that acts on non-sphere shape charged conductors](#)

G5. **J. R. Alston, J. C. Poler.** Electrostatic Binding Studies of dinuclear Ruthenium based Supramolecular Scaffolds

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H2. **R. Baba, C. J. Angamma, S. H. Jayaram, L. T. Lim.** [Electrospinning of Alginate and Poly-ethylene Oxide Blends Using Pulsed Electric Fields to Fabricate Chopped Nanofibres](#)

H3. **M. Sow, D. J. Lacks, R. M. Sankaran.** [Effects of material stress on triboelectric charging](#)

H4. **N. Toljic, K. Adamiak, G. S. P. Castle.** [Three-Dimensional Numerical Studies on the Effect of the Particle Charge to Mass Ratio Distribution in the Electrostatic Coating Process](#)

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I2. **J. Roine, M. Murtomaa, J. Salonen.** [Electroencapsulation of Mesoporous Silicon Particles for Controlled Oral Drug Delivery](#)

I3. **K. Sankaranarayanan, R. P. Ramachandran, M. S. Kumar, V. M. Kumar, S. Vignesh , V. Malini , J. C. M. Renny, S. Guhathakurta, K.M. Cherian, A. Natarajan, R. Sundararajan.** [Electro-Molecular Therapy using Adult Mesenchymal Stem Cells](#)

I4. **R. Beleca, M. Abbod, W. Balachandran.** Electrostatic Properties of DPI Dispensed Drug Aerosols in a Human Upper Airway Model

K. Forces and Fields

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