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Energy **C**hallenges & **M**echanics
- working on small scales

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Speaker of Session 21

ENERGY SAVING TECHNIQUES



Thiago A. L. Burgo received his Ph.D. from University of Campinas (2013), working on the triboelectrification of dielectric polymers, when he identified charge carriers (Burgo, *et. al.* Langmuir **2012**) and showed for the first time their effects on friction coefficients (Burgo, *et. al.* Nature Sci. Rep., **2013**). He joined the Argonne National Laboratory (Chicago – USA) as a postdoc under supervision of the tribologist Ali Erdemir, investigating the exchange of electric charge at metal-insulator interfaces during friction force fluctuations (stick-slip phenomena). Their findings on the fundamental mechanisms of friction force fluctuations in relation to triboemission, tribocurrent charging/discharging at

atomic/molecular scales resulted in a very recent paper displayed as an artwork on journal's cover (Burgo, T. A. L. and Erdemir, A. Angew. Chem. Int. Ed., **2014**). He was awarded with two consecutive prizes of Electrostatic Society of America (ESA) 2012 and 2013 "Joint Electrostatic Conference Student Paper Award" 2nd and 1st Place, respectively. His research interests include scanning probe microscopy, electrostatic adhesion, stream electricity and functional materials.

