

## **Tailoring Ceramic Particles to Improve Lives**

**Ender Suvaci, Eskişehir Technical University, Eskişehir, Turkey**

Characteristics of ceramic particles can play a critical role for achieving high performance particulate materials or ceramics. Therefore, tailoring ceramic particles can be utilized to access enhanced properties and performance. Our research group focuses on exploiting this opportunity to improve lives. In this presentation, three tailored ceramic particle systems and their impact on our lives will be discussed. The first group includes shape controlled anisometric electroceramic particles that are used to enhance the properties and performances of piezoelectric ceramics via texturization and also enable one to replace currently available lead-based piezoceramics with lead-free ones. The second particulate materials system that will be discussed is our patented novel MicNo<sup>®</sup> Technology which was developed to overcome the problems of cosmetic formulators. MicNo<sup>®</sup> particles exhibit only the advantages of micron (safety) and nano (transparent and smooth) particles by mitigating their disadvantages such as whitening effect and potential risks of penetration through the skin, respectively. The third particulate system to be discussed is also our patented technology, called as MicNo-Hyg<sup>®</sup> that was designed and manufactured to form superior antimicrobial and antiviral coatings over ceramic and textile surfaces.