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Materials Characterization and  
Advanced Coatings would like to  
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# Rare earth zirconates: the interplay of structure and properties towards thermal barrier coatings

DELIVERED BY

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## ABSTRACT

The progress in the energy efficiency of modern gas turbine engines and their durability is well known to rely on further improvements in thermal barrier coatings (TBCs). Hence, the design of new materials for TBCs, the optimization of their rather complex structure/microstructure and the development of new efficient, inexpensive and environmentally friendly techniques for their deposition, are now among the most important tasks in materials research. In this presentation, the current results of research which aim to improve the properties of TBCs are presented. In this regard, early stage results of successfully synthesized rare-earth zirconates ( $\text{Ln}_2\text{Zr}_2\text{O}_7$ ) and the in-depth physicochemical characterization of these materials, are presented.

**TUESDAY, START 13:30**

**20/11/2018**

Seminar room **S2.02**,  
building S,  
CEITEC BUT, Purkynova 123



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