

## Themenvorschau INTERCERAM 06.2020

### MINERALS

#### Magnetic Properties of Ceramic Minerals

Magnetic minerals and fine iron have plagued ceramic producers since the first glazed pot was produced many thousands of years ago. Early ceramicists adopted elaborate and colourful patterns to cover any imperfections caused by such contamination. Over time, the demand for white or single coloured ceramic products increased, making disguising any imperfection increasingly difficult.

### EXPERT FORUM

#### Solar Energy: Perovskite Solar Cells on the Fast Lane?

The first perovskite solar cell was developed in 2009. A lot has happened since then: the efficiency of the cells only reached new records this year. And with new manufacturing processes, it may soon be possible to lower the price of perovskite solar cells below that of conventional silicon cells, and to produce cells much faster. We asked two experts when perovskite solar cells could be ready for the market.

### INTERVIEW

#### “Additive Manufacturing is Innovative by Nature”

3DCeram Sinto is a French-tech based company in Limoges with 15 years of experience in 3D printing of complex ceramic parts with an extensive products and services portfolio and its own line of ceramic 3D printers. Interceram talked to Kareen Malsallez, Marketing Manager, and Nicolas Roussellet, Aerospace Business Manager, about their new service called 3D-AIM.

### MIXING TECHNOLOGIES

#### Machines Fit for the Future

Ceramica Mayor is one of the market leaders and largest producers of extruded ceramics in Spain. For their ceramic mass preparation, they have recently modernized their mixing and dosing system with the help of the company Eirich, Germany. Eirich offers a comprehensive range of machines, plants and services related to the preparation of bulk materials, slurries and sludges.

### RECYCLING

#### Utilization of Cement Kiln Dust

From the economic and environmental point of view, the recycling of industrial wastes is considered interesting research and has been paid attention to by many scientists all over the world. One of these wastes is cement kiln dust (CKD), which causes a significant environmental pollution problem. In this study, CKD and Egyptian raw materials were used to prepare borosilicate glass by a fusion method.

### CONDUCTIVITY

#### Electrical and Physical Properties of Ceramic Whisker

Aluminium borate ceramic materials are considered to have a high elastic modulus and tensile strength and a low thermal expansion. They may be utilized for optical electronics, structure applications and tribology. With these characteristics, nanostructures such as whiskers, microtubes and nanowires may have potential in oxidation-resistant reinforced composites, chemical and heat-insulating materials and filter media.

### SPINEL

#### Effect of Zr<sup>4+</sup> Dopant on ZnAl<sub>2</sub>O<sub>4</sub> Spinel

ZnAl<sub>2</sub>O<sub>4</sub> belongs to the normal spinel family in which Zn<sup>2+</sup> ions occupy the divalent tetrahedral interstices and trivalent Al<sup>3+</sup> ions occupy the octahedral interstices in the FCC lattice of oxygen ions. Nowadays, ZnAl<sub>2</sub>O<sub>4</sub> ceramics is attracting the attention of scientists because of its extensive multifunctional applications, such as a catalyst carrier for metals, as a catalyst in dehydration of saturated alcohols to olefins, in alkylation, double-bond isomerization, hydrogenation and hydroxylation, as a potential reservoir and carrier for drug delivery, coating materials, sintering aids, or sensors in electronic devices. This is primarily due to its high mechanical resistance, high chemical durability and good thermal stability.

### Termine

**Anzeigenschluss:** 13.10.2020  
**Druckunterlagenschluss:** 19.10.2020  
**Erscheinungstermin:** 04.11.2020

### Ihr Ansprechpartner



**Lucie Grimm**  
 Mediaberatung  
 +49 (0) 611.7878 165  
 lucie.grimm(at)springernature.com