

# 2018

### Abstracts

## **93. DKG Jahrestagung** *93<sup>rd</sup> DKG Annual Meeting*

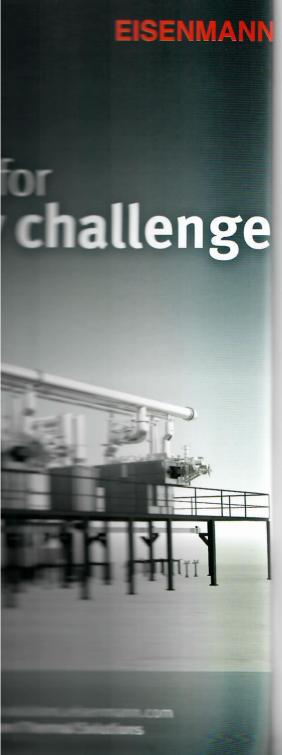
in Verbindung mit dem Symposium Hochleistungskeramik

in conjunction with the Symposium on High-Performance Ceramics

10.–13.04.2018 Messe München

www.dka.de

KERAMIK. WERKSTOFF DER MENSCHHEIT.





2018

**Abstracts** 

**93. DKG Jahrestagung** 93<sup>rd</sup> DKG Annual Meeting

in Verbindung mit dem Symposium Hochleistungskeramik

in conjunction with the Symposium on High-Performance Ceramics

10.–13.04.2018 Messe München



#### Interview mit dem Geschäftsfül

der QUANTACHROME GmbH & Co

Gasadsorption für Oberflächen- u Porenanalyse mit dem CryoSync'

#### Das neue AUTOFLOW BET+:

ein Revival der BET-Flow-Methode

#### **Der BETTERSIZER S3 Plus:**

"The next Generation" in der Partikelgrößenanalyse



#### Publisher

Deutsche Keramische Gesellschaft e.V. Bergerstraße 145 a 51147 Köln Germany

Tel: +49 (0) 2203 989877-0 Fax: +49 (0) 2203 989877-9

#### Responsible for the Content

The respective authors are solely responsible for the content of their abstracts. The responsible publisher according to media and press law is Dr.-Ing. Detlev Nicklas.

#### **Production and Layout**

Thomas Fankhänel Stephan Lipensky

#### **Content Management**

DKG CongressPro http://www.dkg.de/veranstaltungen/dkg-congresspro

#### **Printed in Germany**

March 2018

This document, including all its parts is protected by copyright. Any use outside the narrow limits of copyright law without the consent of the publisher and the authors is illegal and punishable by law. This applies in particular to reproductions, translations, microfilming and storage and processing in electronic systems. The contents of this book have been prepared with care. However, the publisher does not guarantee the accuracy or completeness of the information contained in this book.

#### Usage of ceramics in making of historical mortars

TOPLICIC-CURCIC, Gordana; MITIC, Vojislav; MOMCILOVIC-PETRONIJEVIC, Ana; PAUNOVIC, Vesna; DRAGAN M OREVIC, Dragan; GRDIC, Dusan

University of Nis, Serbien

#### Presenter

Prof. Dr MITIC, Vojislav vmitic.d2480@gmail.com

#### Organization/Company

University of Belgrade Institute of Technical Sciences of Serbian Academy of Sciences

Knez Mihailova 35 11000 Belgrade Serbia It is well known that ceramics was used for construction of engineering structures since ancient times. One of its usages is for making of mortars. It is know that it was used as a crushed brick or it was ground in fine powder, thus obtaining puzzolanic properties and it was used as an admixture to binders. The paper presents the tests of two types of historical mortars from two different locations in Serbia. Specificaly, those are Gamzigrad (Romuliana) near Zajecar and the archeological site Caricin Grad near Leskovac. Base on the examined mechanical properties of mortar and on the microstructure determined using the optical microscopy and SEMEDS analyses, it was concluded that at both sites, ceramics was as aggregate. In addition, it was concluded that at the Caricin Grad site, powdered brick blocks were used as additional binder, since pulverization created the puzzolanic properties.

### Study of fly ash-based geopoly fibers as sustainable composit

MOLANO CAMARGO, Marfa Carolina<sup>1</sup>; BOCCAC

<sup>1</sup> Friedrich Alexander University Erlangen, Biomaterials Institute, Materials, Deutschland

The unsustainable consumption of fossil-based mate the demand of composites has become a pressing is: ecological materials. Therefore, this poster focuses on the mechanical and microscopic properties of fly ashgeopolymers reinforced with natural fibers. The exper trials were carried out in two stages. During the first p different percentages of cotton and sisal fibers were in to determine their effects on mechanical performanc ash geopolymer composites. The second phase, was a evaluating the influence of processing parameters on composites with optimum fiber addition. Compressiv strength tests were conducted. Furthermore, XRD, FTI analyses were performed. The results indicated that n enhanced the tensile strength of fly ash geopolymer p SEM analysis suggested good fiber-matrix adhesion. N reinforced geopolymers can be thus considered as a c towards the future's composite materials