

8<sup>th</sup> International Conference and Exhibition on

# MATERIALS SCIENCE AND ENGINEERING

May 29-31, 2017 Osaka, Japan

## Fabrication and characterization of $\text{SiO}_2\text{-CaO-Na}_2\text{O-K}_2\text{O-MgO-P}_2\text{O}_5$ based glass coatings

**Si-Won Seong**

Soonchunhyang University, Republic of Korea

Glasses of  $\text{SiO}_2\text{-CaO-Na}_2\text{O-K}_2\text{O-MgO-P}_2\text{O}_5$  based system were synthesized by conventional melting process. The possibility of coating the glasses on Ytria Partially Stabilized Zirconia (Y-PSTZ) was considered. In this study, various alterations were examined in the aforementioned base system, in order to optimize the various properties of the resulting glass coatings. The processing conditions and heat treatment were also studied for their effect on the resulting properties, such as transmittance over the visible spectra, hardness, fracture toughness, and adhesive strength.

### Biography

Si-Won Seong has graduated from Soonchunhyang University in Republic of Korea. He has interest and passion in finding new materials. He has operated many measuring equipments such as XRD, SEM, and DTA to evaluate materials. Now he is pursuing a master's degree in Soonchunhyang University. His current research area is glass coating for various applications.

hold3194@naver.com

**Notes:**