Meetings International SciTechnol

Sang-Won Park et al., J Nanomater Mol Nanotechnol 2018, Volume: 7
DOI: 10.4172/2324-8777-C4-030

International Conference on

NANOTECHNOLOGY AND NANOENGINEERING

July 16-18, 2018 | Paris, France

Evaluation of cure depth and geometrical overgrowth depending on Zirconia volume fraction using digital light processing

Sang-Won Park[1,2], Kyoung-Jun Jang[1], Jin-Ho Kang[1], Kumaresan Sakthiabirami[1], Hyun-Pil Lim[1], Kwi-Dug Yun[1], Eun-Kyung Yim[1], Gye-Jeong Oh[2], Hyun-Sam Yang[3] and **Kyung-Ku Lee[4]**

[1]Chonnam National University, Korea
[2]Chonnam National University, Korea
[3]Nambu University, Korea
[4]Gwangju Technology Park, Republic of Korea

The optical properties of zirconia photopolymer suspension for DLP (Digital Light Processing) were evaluated. The light source and intensity were set to 395 nm and 30 mW/cm^2. Experimental groups were divided into 48, 50, 52, 54, 56 and 58 vol% according to the zirconia volume fraction. The cure depth of all groups was at least 47.35um when cured for 1 sec, which was higher than layer parameter values of the 3d printer. The geometrical overgrowth showed 28.55% at 48vol% and 36.94% at 58vol%. As the volume fraction of zirconia increased, the geometrical overgrowth increased and the cure depth reduced.

Biography

Sang-Won Park has completed his PhD at the age of 30 years from Chonnam National University, Korea. He is the professor in the department of prosthodontics Chonnam National University dental hospital. He has published more than 50 papers in reputed journals and has registered several patents.

psw320@naver.com

Notes: