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## ACCEPTED MANUSCRIPT

# Femtosecond laser-induced periodic surface microstructure on dental zirconia ceramic

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#### Abstract

The inert and high-strength of zirconia ceramic make it a big challenge to develop simple and reliable methods for increasing surface roughness with controlled morphologies. This study investigated the suitability of femtosecond laser for surface modification of zirconia. The laser pulse energies were set at 180  $\mu$ J and 90  $\mu$ J respectively, with pulse duration of 35 fs, a repetition rate of 2 kHz, and wave length

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