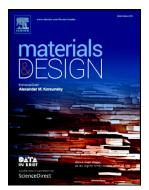
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Abstract

Porous materials are of great importance in various industrial applications. Microscopic modifications in the pore structures of these materials can change their functional behavior. We treat Indiana limestone by lasers to modify its pore structures microscopically. Microcomputed tomography (micro-CT) of the treated samples reveal that pulsed Nd:YAG laser with energy 330 mJ increases open porosity of limestone by 15% and almost doubles the total porosity. This laser increases the limestone pore connectivity by 460%. High power CO_2 laser increases the open porosity by 20% but it reduces the pore

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