

## ovosibirsk tate niversity Obtained By Laser Evaporation

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## Conclusions

- The a-C12A7 obtained by laser evaporation is rather complicated system and has local regions with different chemical composition.
- The in situ XRD study has shown that the recrystallization of a-C12A7 occurs through CaCO<sub>3</sub> phase formation. It can be performed at acceptable temperature (800-900°C) to avoid undesirable chemical reactions with different substrates.
- The XRD and microscopy studies also showed the presence of impurities (CaCO<sub>3</sub>) which can form coatings on the C12A7 particles surface. The formation of them can be explained by different Ca and Al mobility and may promote the mechanical stresses, cracking and delamination of thin films.

## Literature

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TEM images of C12A7 particle and CaCO<sub>3</sub> surface layer after calcination on air