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Type: Talk

Effect of the embedded plasmonic gold nanorods on the interaction of high intensity laser irradiation with UDMA polymer –the volume loss during crater formation

Wednesday 7 September 2022 17:30 (30 minutes)

In this work we studied the effect of the addition of gold nanoparticles to urethane dimethacrylate (UDMA) polymer on the crater formation during high intensity femtosecond laser irradiation.

UDMA polymer samples were prepared without gold nanorods and with those in two different concentrations and were irradiated in different spots with single femtosecond laser pulses of different energies. It was observed that a certain amount of the polymer material is removed from the sample, and the surrounding of the formed craters was studied by white light interferometry. Our results prove the presence of plasmonic effect during the irradiation of the UDMA containing gold nanoparticles and suggest some interesting behaviour in the bonding structure of the polymer.

Is this abstract from experiment?

Yes

Name of experiment and experimental site

Wigner RCP, NAPLIFE, <http://csernai.no/naplife/>

Is the speaker for that presentation defined?

Yes

Details

Ágnes Nagyné Szokol, Wigner RCP, <https://wigner.hu/>

Internet talk

No

Authors: Dr KUMARI, ARCHANA (Wigner RCP); NAGYNE SZOKOL, Agnes (Wigner RCP); BORÓK, Alexandra (Wigner RCP); BONYÁR, Attila (<https://www.reseaBudapest University of Technology and Economics>); Dr RIGÓ, István (Wigner RCP); Dr KÁMÁN, Judit (Wigner RCP); Prof. CSERNAI, Laszlo Pal (University of Bergen); Dr SZALÓKI, Melinda (University of Debrecen, Department of Prosthetic Dentistry); Dr KEDVES, Miklós (Wigner

RCP); Dr VERES, Miklós (Wigner RCP); Dr ALADI, Márk (Wigner RCP); KROÓ, Norbert (Wigner Research Centre for Physics); Dr PÉTER, Rác (Wigner RCP); BIRO, Tamas Sandor (MTA Wigner RCP)

Presenter: NAGYNE SZOKOL, Agnes (Wigner RCP)

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