Supporting information

Impact of in situ polymer coating on particle dispersion into solid laser-generated nanocomposites

*Philipp Wagener[1,†], Gudrun Brandes[2,†], Andreas Schwenke[1], and Stephan Barcikowski[1,]**

1: Laser Zentrum Hannover e. V., Hollerithallee 8, D-30419 Hannover, Germany
2: Institute of Cell Biology and Electron Microscopy, Medical School Hannover, Carl-Neuberg-Str. 1, D-30625 Hannover, Germany

* To whom correspondence should be addressed: s.barcikowski@lzh.de
†These authors equally contributed to this work

Nanoparticle productivity and subsequent nanoparticle concentration is directly linked to the amount of laser-ablated mass. Therefore, we measured the amount of ablated mass after a fixed time interval for polyurethane (TPU) concentrations up to 3 wt%. As no precipitation or of redeposition of laser-generated nanoparticles could be observed, the ablated mass is directly proportional to the nanoparticle concentration.. As can be seen in figure S1 there is just a slight decrease in ablation rate up to a TPU concentration of 0.5 wt%. Therefore, nanoparticle concentration in all analysed samples is comparable and should not effect analyzed parameters like interparticle distance significantly.

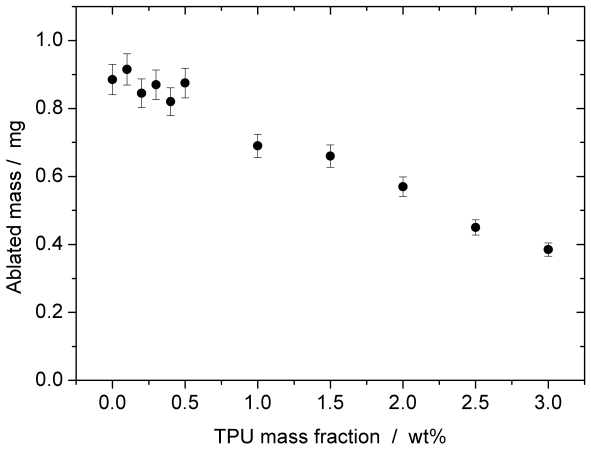

Fig. S1: Total ablated mass of silver in TPU-doped THF at different TPU-concentration (laser ablation time 10 min)