Incorporation of Core-shell Particles in Methacrylate based Composites for an Improvement of the Mechanical Properties

Benedict Sandmann,^ab^ Bobby Happ,^ab^ Igor Perevyazko,^ab^ Tobias Rudolph,^ab^ Felix H. Schacher,^ab^ Stephanie Hoeppener,^ab^ Ulrich Mansfeld,^ab^ Martin D. Hager,^ab^ Urs K. Fischer,^c^ Peter Burtscher,^c^ Norbert Moszner,*c^ and Ulrich S. Schubert,*^ab^

^a^Laboratory of Organic and Macromolecular Chemistry (IOMC), Friedrich Schiller University Jena, Humboldtstraße 10, 07743 Jena, Germany

^b^Jena Center for Soft Matter (JCSM), Friedrich Schiller University Jena, Philosophenweg 7, 07743 Jena, Germany

^c^Ivoclar Vivadent AG, Bendererstrasse 2, FL-9494 Schaan, Liechtenstein

Correspondence to: Ulrich S. Schubert (E-mail: ulrich.schubert@uni-jena.de) or Norbert Moszner (E-mail: norbert.moszner@ivoclarvivadent.com)

Supporting Information

Dynamic light scattering results:

![DLS trace of polymer seeds 1 (black line) and polymer cores 2 (red line) and 3 (blue line).](FIGURE SI-1)

Electronic Supplementary Material (ESI) for Polymer Chemistry. This journal is © The Royal Society of Chemistry 2015
FIGURE SI-2 DLS trace of core-shell particles 4 (black line) 5 (red line), 7 (orange line), 9 (blue line), 10 (pink line) and 11 (green line).

FIGURE SI-3 DLS trace of core-shell particles 6 (red line) and 8 (black line).