

Non-cytotoxic, temperature-responsive and antibacterial POEGMA based nanocomposite coatings with silver nanoparticles

Svyatoslav Nastyshyn¹, Joanna Raczkowska^{1}, Yuriy Stetsyshyn^{2*}, Barbara Orzechowska³, Andrzej Bernasik⁴, Yana Shymborska², Monika Brzywczy-Włoch⁵, Tomasz Gosiewski⁵, Ostap Lishchynskiy², Halyna Ohar², Dorota Ochońska⁵, Kamil Awiuk¹, Andrzej Budkowski¹*

¹Smoluchowski Institute of Physics, Jagiellonian University, Łojasiewicza 11, 30-348 Kraków, Poland

²Lviv Polytechnic National University, St. George's Square 2, 79013 Lviv, Ukraine

³Institute of Nuclear Physics Polish Academy of Sciences, Radzikowskiego 152, 31-342 Kraków, Poland

⁴Faculty of Physics and Applied Computer Science, Academic Centre for Materials and Nanotechnology, AGH University of Science and Technology, Al. Mickiewicza 30, 30-049 Kraków, Poland

⁵Chair of Microbiology, Department of Molecular Medical Microbiology, Faculty of Medicine, Jagiellonian University Medical College, Czysza 18, 31-121 Kraków, Poland

*Corresponding authors E-mail: Yuriy Stetsyshyn yrstecushun@ukr.net, Joanna Raczkowska joanna.raczkowska@uj.edu.pl

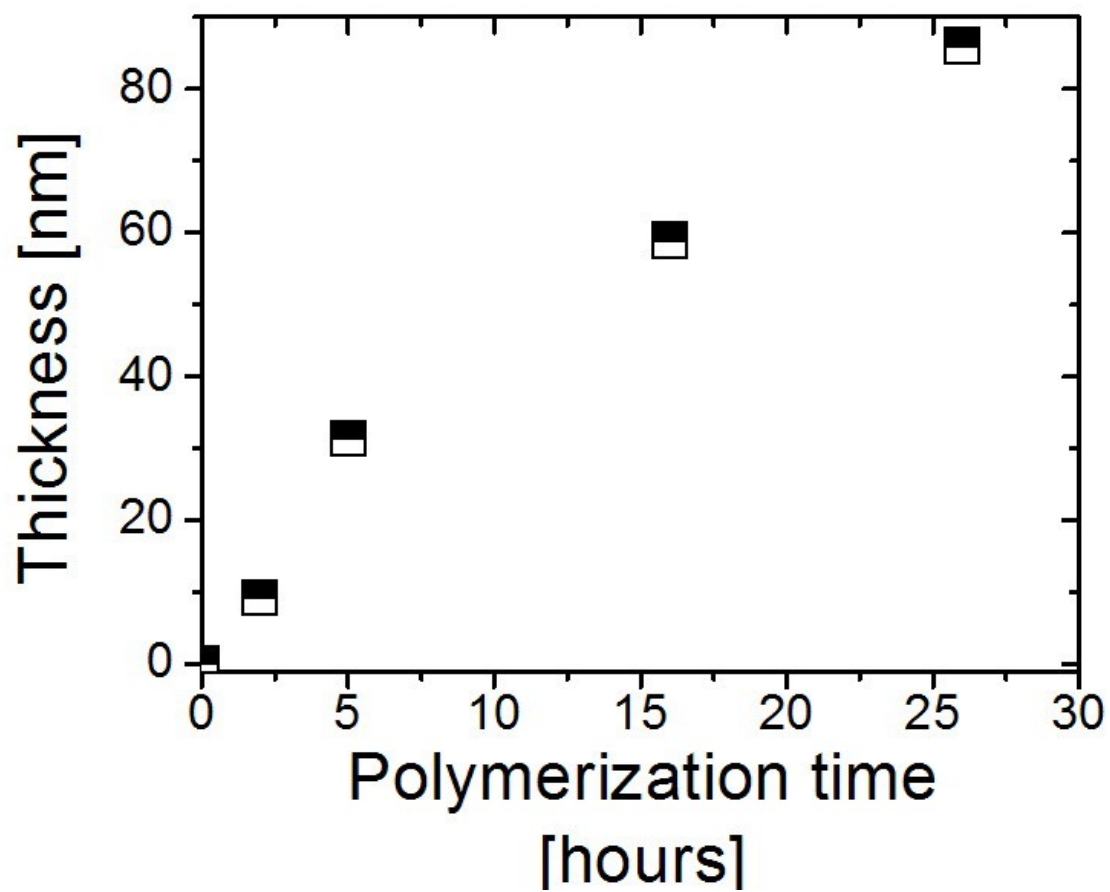


Figure S1. Thickness of grafted POEGMA188 brush coatings versus polymerization time.

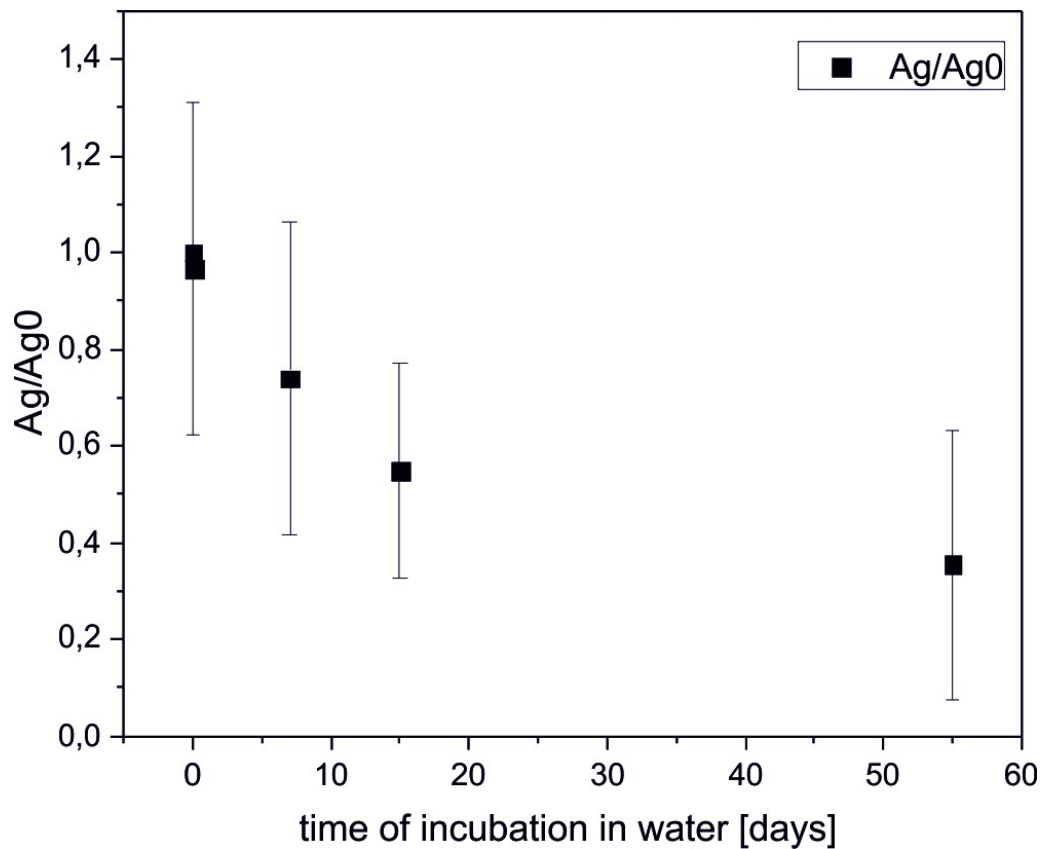


Figure S2. Silver release from POEGMA188 grafted brushes nanocomposite coatings fabricated by 16 hours of polymerization with AgNPs incorporated after 15 min of immersion at 5 mM AgNO₃ solution followed by reduction in 0.2 M NaBH₄ solution for 12 h.