

Temperature-responsive properties of poly(4-vinylpyridine) coatings: Influence of temperature on wettability, morphology, and protein adsorption[†]

Joanna Raczkowska^{1}, Yurij Stetsyshyn^{2*}, Kamil Awsiuk¹, Joanna Zemla¹, Andrij Kostruba³, Khrystyna
Harhay², Mateusz Marzec⁴, Andrzej Bernasik^{4,5}, Ostap Lishchynskyi², Halyna Ohar², Andrzej Budkowski¹*

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

²Lviv Polytechnic National University, S. Bandery 12, 79013 Lviv, Ukraine

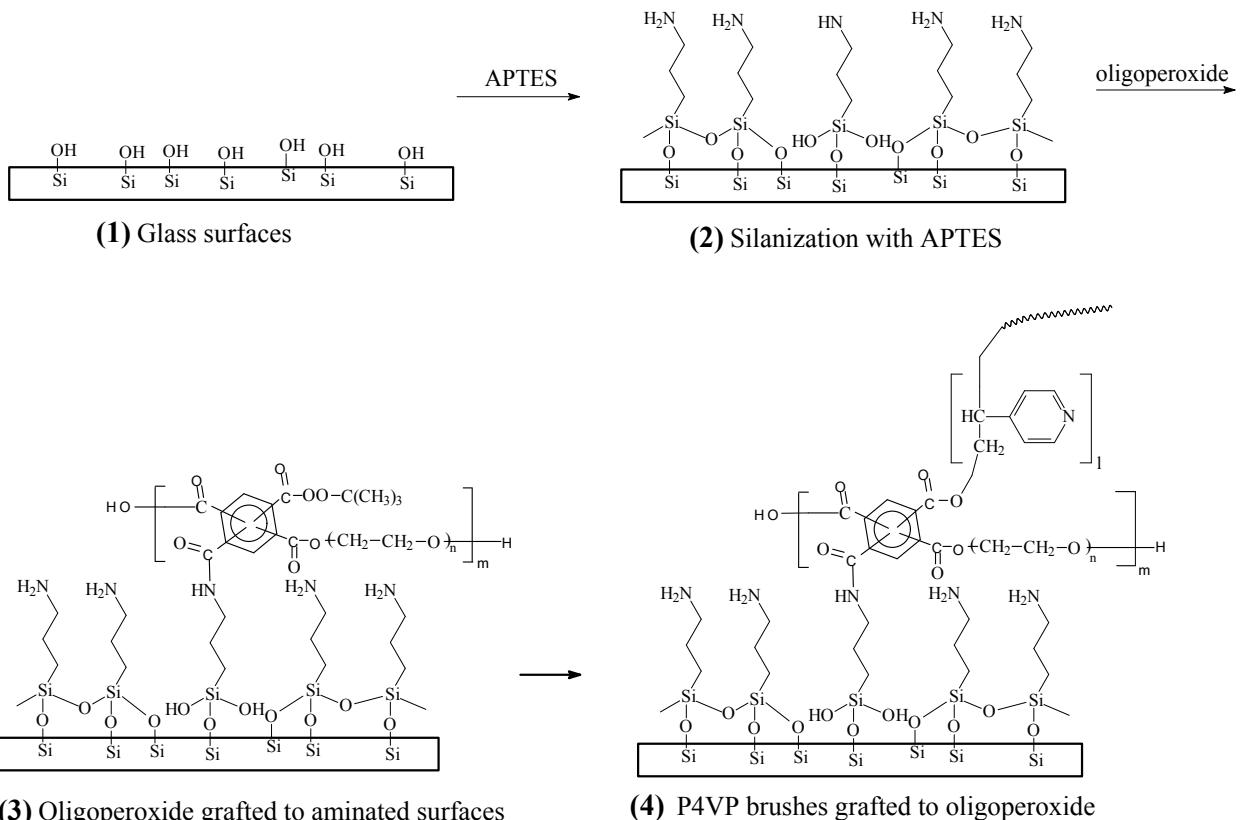
³Lviv Academy of Commerce, Samtshuk 9, and Lviv Institute for Physical Optics, Dragomanov 19, 79011
Lviv, Ukraine

⁴ Academic Centre for Materials and Nanotechnology, al. A. Mickiewicza 30, 30-059 Kraków, Poland

⁵ AGH University of Science and Technology, Faculty of Physics and Applied Computer Science, al. A.
Mickiewicza 30, 30-059 Kraków, Poland

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

[†]Electronic supplementary information (ESI) available: Scheme of the procedure used to prepare P4VP grafted brushes, X-ray photoelectron spectroscopy data confirming surface coverage with P4VP grafted brushes.



Scheme S1. Functionalization of glass surface (1) with amino-terminated APTES film (2), subsequent grafting of oligoperoxide (3), and polymerization of 4VP, initiated by peroxide groups of oligoperoxide and resulting in P4VP brushes (4).

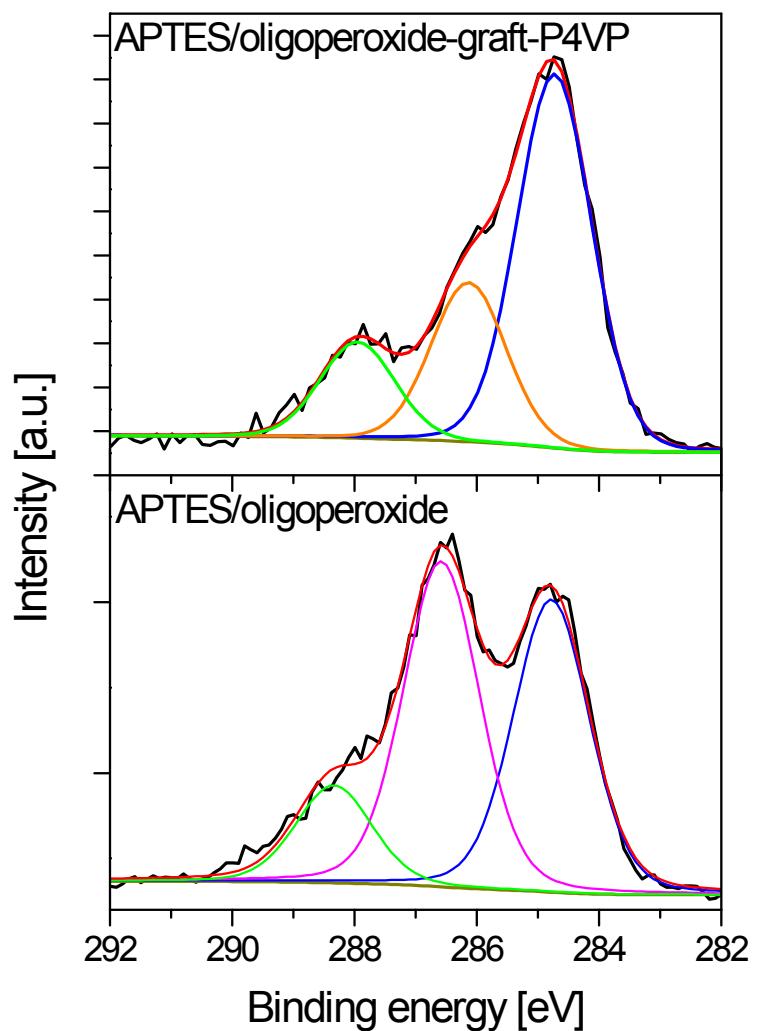


Fig.S1. XPS Representative C 1s XPS spectra of the APTES-modified glass surface after subsequent steps of oligoperoxide grafting for 24 h and 4VP polymerization for 48 h.