



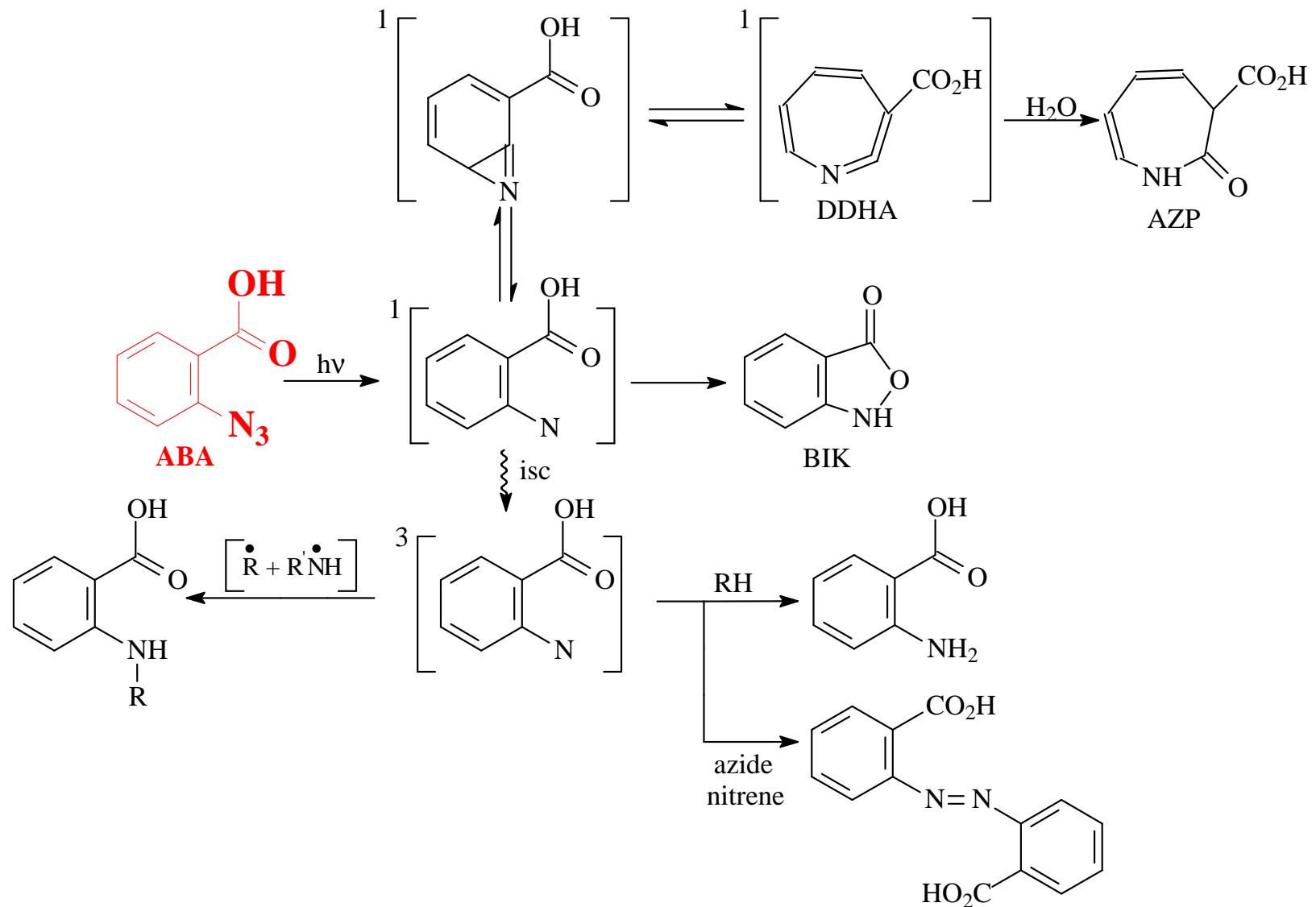
Photochemical modification of a polymer surface with bifunctional dyes of the phenothiazine series

Darya Yu. Dzhons, Andrei V. Budruev

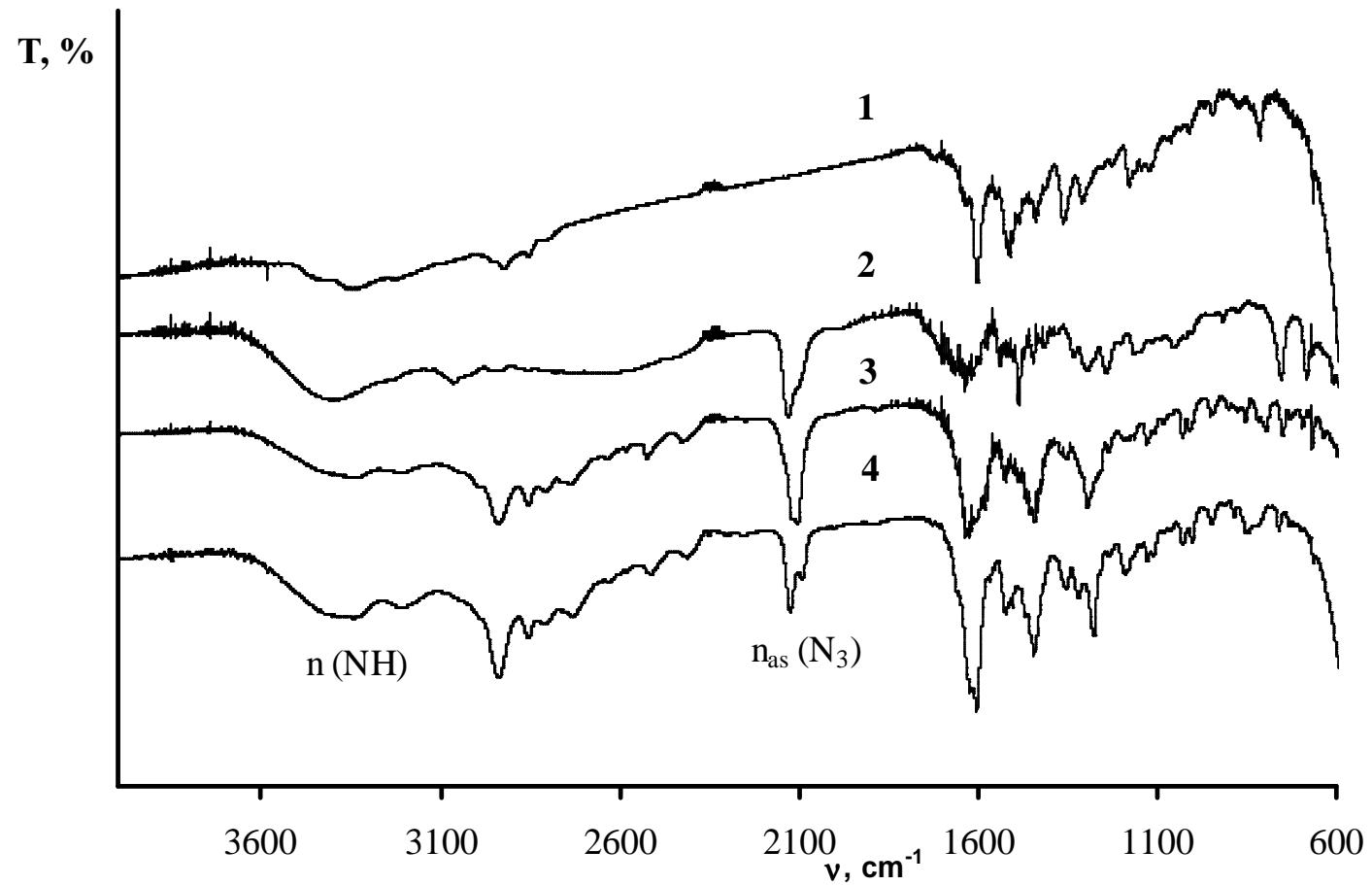
*Lobachevsky State University of Nizhni Novgorod, Gagarin Ave., 23,
Nizhnii Novgorod, 603950, Russia.*

E-mail: budruev@gmail.com

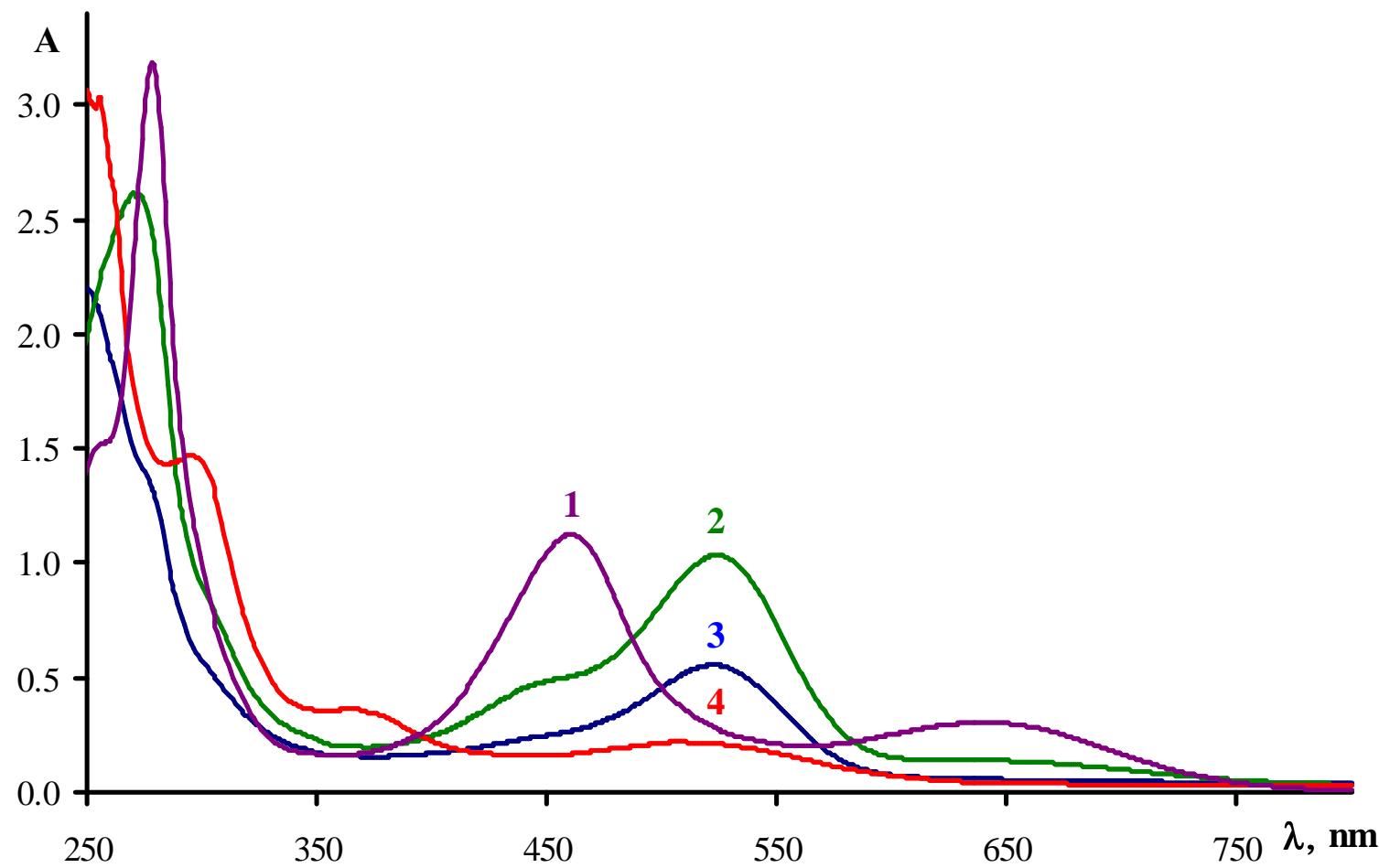
The photolysis of substituted aryl azides, for example
2-azidobenzoic acid.



IR spectra of TBO (1), TBO – 2– azidobenzoic acid (2), TBO – 3– azidobenzoic acid (3), and TBO – 4– azidobenzoic acid (4) in thin films.

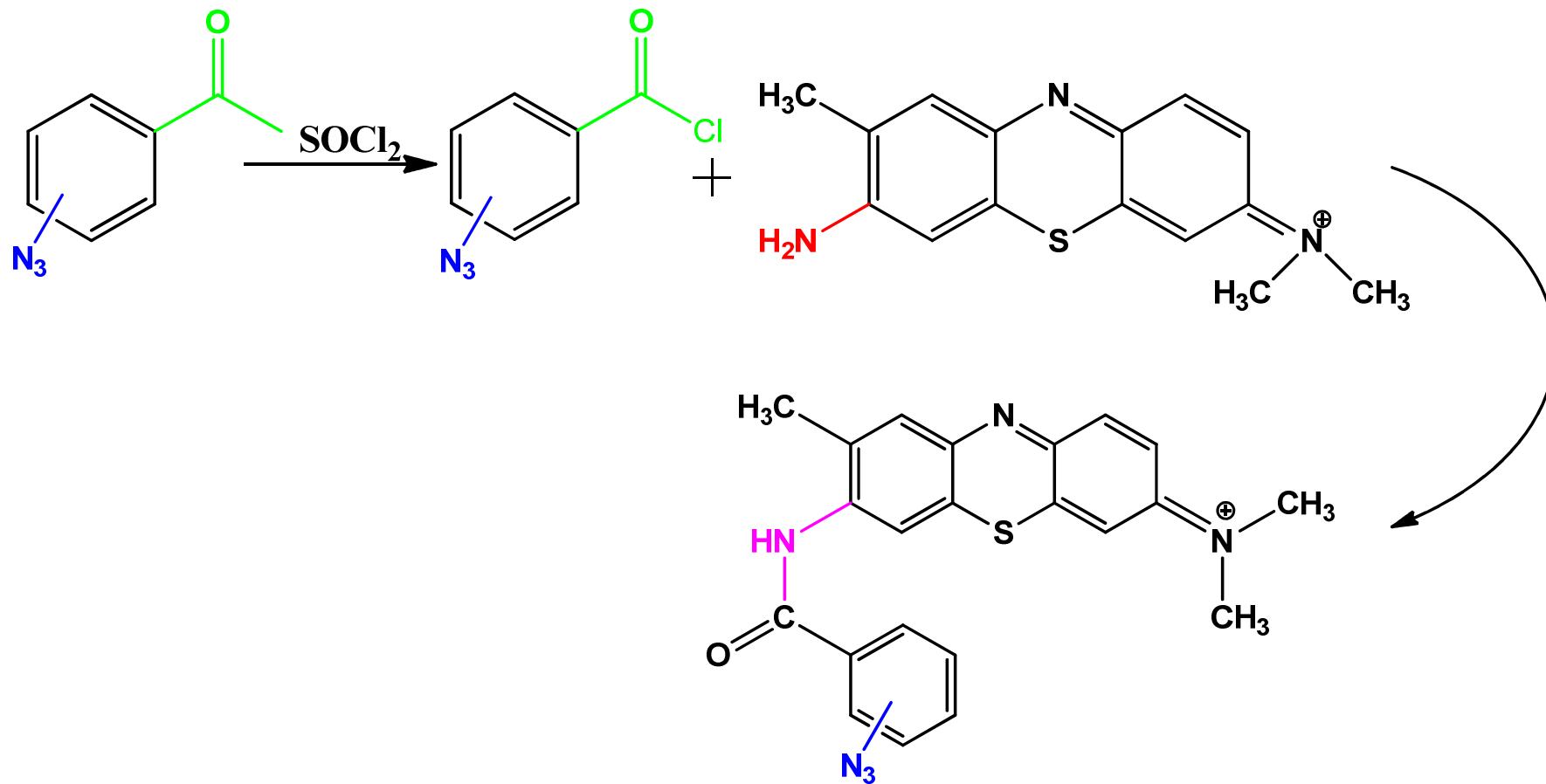


UV spectra of TBO (1), TBO – 2– azidobenzoic acid (2), TBO – 3– azidobenzoic acid (3) and TBO–4– azidobenzoic acid (4) in acetonitrile.

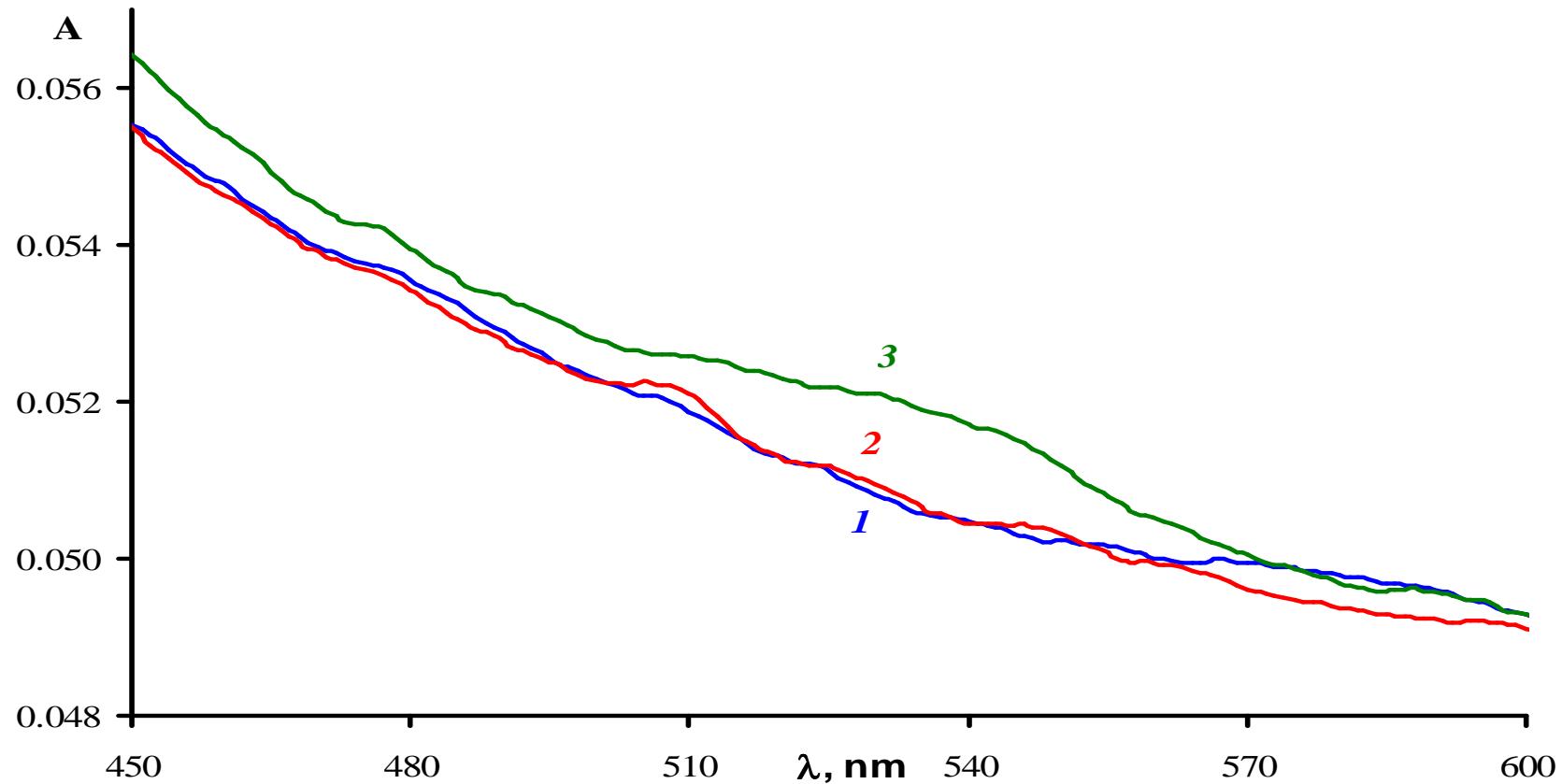


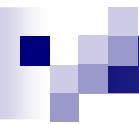


Formation of a difunctional dye

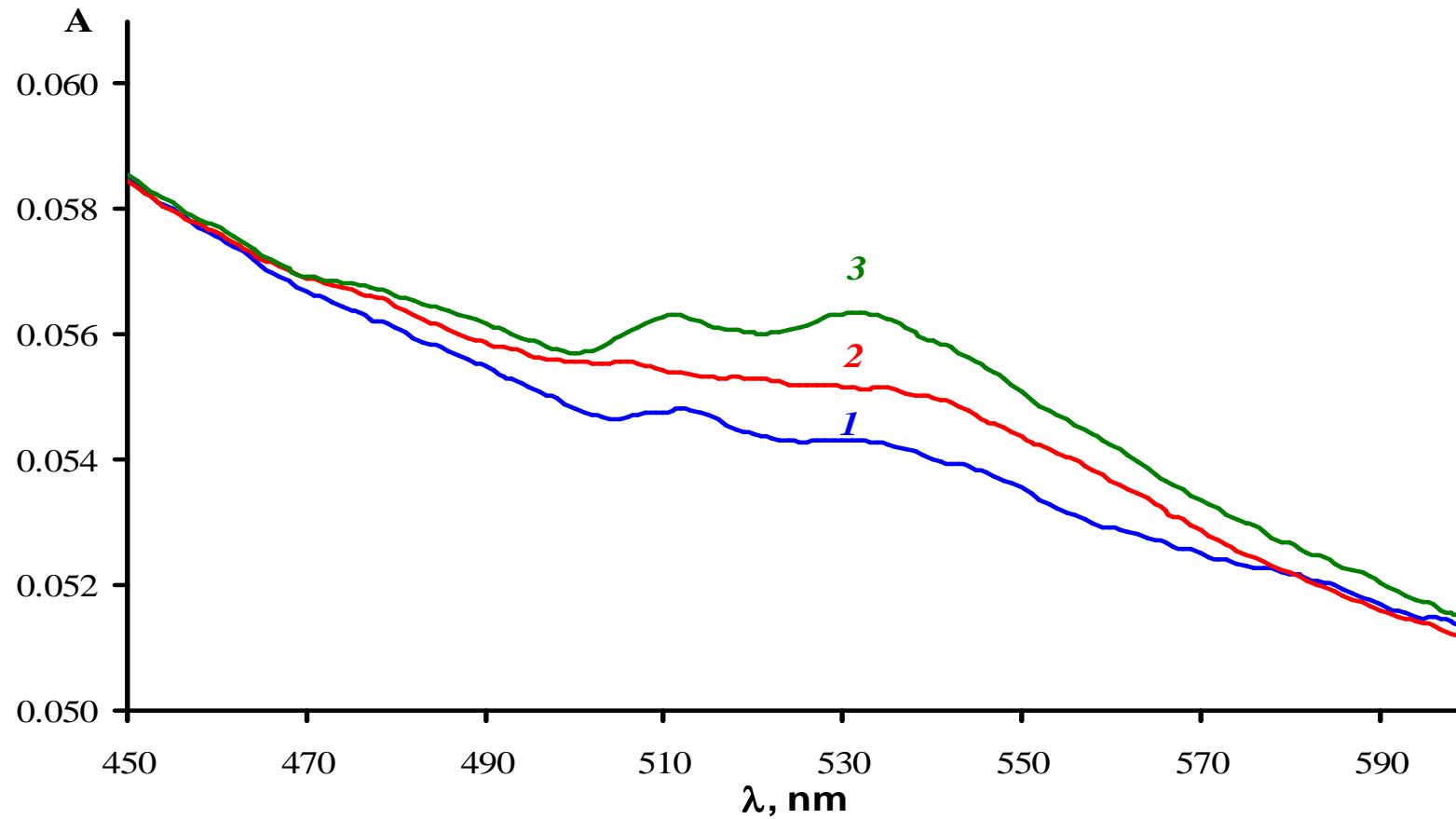


The sample PET modified by TBO - 2-azidobenzoic acid. 1 - PET,
2 - PET without irradiation, 3 - PET irradiated for 30 min.

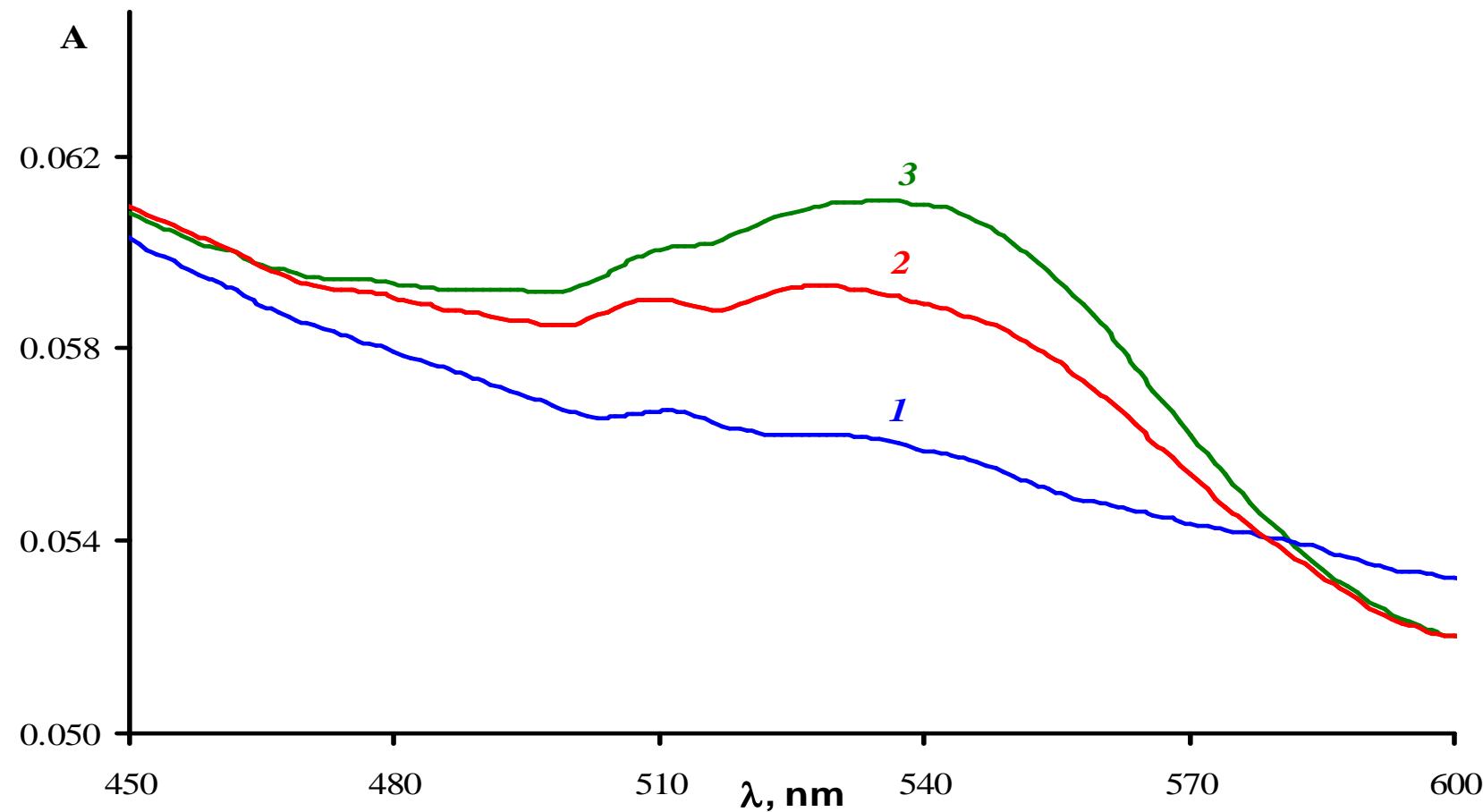




Sample PET modified by TBO - 3-azidobenzoic acid. 1-PET, 2 -
PET without irradiation, 3 - PET irradiated for 30 min.



Sample PET modified by TBO- 4 -azidobenzoic acid: 1- PET , 2 - PET without irradiation , 3 - PET irradiated for 30 min.



The dependence the optical density at an analytical wavelength of modified PET samples on irradiation time. Concentrations of solutions are 1– 1×10^{-3} M, 2– 2.5×10^{-3} M, and 3 – 2×10^{-4} M.

