



“Gheorghe Asachi” Technical University of Iasi, Romania



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## PHYSICAL NETWORKS BASED ON GELATIN AND AZO-POLYSILOXANES

Elena- Luiza Epure<sup>1</sup>, Elena Resmeriță<sup>1</sup>, Anca Daniela Rusu<sup>1,2</sup>,  
Bogdana Simionescu<sup>3</sup>, Constanța Ibănescu<sup>1,4\*</sup>

<sup>1</sup>“Gheorghe Asachi” Technical University of Iasi, Department of Natural and Synthetic Polymers, 73,  
Prof. Dimitrie Mangeron Street, 700050 - Iasi, Romania; Fax number +40232271311;

<sup>2</sup>CEA, LIST Saclay, Laboratoire Capteurs et Architectures Électroniques, 91191 Gif-sur-Yvette, Cedex, France

<sup>3</sup>“Costin D. Nenitescu” Centre of Organic Chemistry, 202B Splaiul Independentei, 71141 Bucharest, Roumania

<sup>4</sup>“Petru Poni” Institute of Macromolecular Chemistry, 41A, Grigore Ghica Voda Alley, 700487 - Iasi, Romania

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### Abstract

Novel systems based on modified azo-polysiloxanes and gelatin with potential biological applications were prepared and characterized. Simultaneous rheological and UV irradiation studies allowed evidencing structural modification inside the gelatin matrix. For all analyzed samples a shift in the temperature corresponding to the physical network destructuration, from 30°C (corresponding to gelatin) to 40°C (for the composite) was noticed. The experimental results proved the existence of interactions between gelatin and polysiloxanes intensified after UV irradiation. The increase in the values of  $G'$  and  $G''$  is a consequence of system restructuration leading to more arranged architectures able to release the included active principle. As a function of the azo-polysiloxane structure, the destructuration temperature of the composite can be tuned in the domain 30- 40°C.

*Key words:* biopolymers, dynamic moduli, gelatin, nucleobases, rheology

*Received:* January, 2014; *Revised final:* October, 2014; *Accepted:* October, 2014; *Published in final edited form:* July, 2018

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\* Author to whom all correspondence should be addressed: email: [ibanescu@ch.tuiasi.ro](mailto:ibanescu@ch.tuiasi.ro)