

PRILEPOV, V., GASIN, PRILEPOV, I., MIDONI, A., CHIRITA, A., SPOIALA, D., P. KETRUSH, P. Red blood cells interaction with vanadium and its oxides based nanocomposite structures. In: Optoelectronics and Advanced Materials – Rapid Communications. 2014, Vol .8, Nr. 1-2, pp.164-167. ISSN 1842-6573.

The results of the investigation of vanadium and its oxides based nanocomposite structures interaction with the water are brought in this paper. It was established, that at the non-contact interaction of the nanocomposite structures with the water, its activation occurs, which is revealed in a change in the sign of the redox potential of the water from the initial positive to the negative one. Besides, the activation effect is interconnected, i.e. the activation both of the water as well as of nanocomposite structures occurs. The observed effect is explained in the frame of the resonance interaction of the oscillating dipoles theory (the conductive clusters uniformly distributed in V₂O₅ dielectric matrix with the water molecule dipoles). On the basis of the experimental results, one can affirm that the vanadium and its oxides based nanocomposite structures are a biologic activators and can be used in a modern biomedicine