

Cluster electric aura of colloid-chemical oxyhydrate systems

© Yury I. Sukharev,*⁺ Boris A. Markov, Inna Yu. Apalikova, and Oksana M. Krutikova

Department of Solid State Chemistry and Nanoprocesses. Chelyabinsk State University.

Bratiev Kashirinykh St., 129. Chelyabinsk, 454000. Russia.

Phone: +7 963-460-27-75. E-mail: Yuri_Sucharev@mail.ru.

*Supervising author; ⁺Corresponding author

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Abstract

The research that we conducted into nonlinear properties of gel oxyhydrate systems revealed the following oscillatory dilatancy, oscillatory (pulsation) electrical conductivity, spontaneous electrical current of the gel self-organization accompanied by polarization phenomena, tinting of gel systems, oscillatory optical and sorptive properties, and many more. Those properties are attributed to wide occurrence of periodical processes in colloid chemistry of gel oxyhydrate systems of rare-earth elements, as well oxides-hydroxides of some of the *d*-elements, such as zirconium, niobium, titanium, etc. It is coherent chemistry that conducts researches into the subject, that is to say, chemistry of oscillatory periodical processes. The problem is that both classical inorganic chemistry and colloid chemistry remain far from understanding and elaborating an oscillatory development paradigm of the phenomena. However, even now the phenomena in question make it possible to see colloid systems crystallography in a new light, and to study changes in the shapes of colloid clusters in time. Our other approaches to the research into structures of gel colloid systems in time are rather of speculative nature.