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## Theory and application practice of the binary mixtures sol-gel transition concept for fire and explosion prevention

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Accidents and catastrophes with fires and explosions including accidents at facilities with hazardous chemicals are getting global problem. These problems are getting more dangerous because of the high probability of the terroristic attacks connected with hazardous chemicals application. New technology of the accelerated accident liquidation in the case of chemical and radiation dangerous materials opened appearance risk is presented by the manuscript authors. Experience of application of the new patented binary mixtures sol-gel transition technology is described as applied for fire and explosion prevention, solid combustible materials and explosives fire-extinguishing, chemical protection and others.



### Biography

Denis S Kuprin is the Head of Laboratory of Fire and Explosion Prevention, graduate of the Saint Petersburg State University. He is the coauthor of invention concerning generation and application of fast-hardening foam based on the structured silica particles. He is also the author of publications concerning main concept of the sol-gel transition for creation of fire-extinguishing foams which are intended for fire and explosion prevention, heat protection, screening in the case of accidents with radiation and hazardous chemicals and others.

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