

This diploma thesis is dealing with the electrochemical investigation of redox properties of a new compound 2,2-dinitroethen-1,1-diamine, which belongs among explosives and is known as FOX-7. Such research up to now was not performed. Using standard electrochemical methods (dc-polarography, cyclic voltammetry, coulometry and preparative electrolysis) the reducibility of the FOX-7 was investigated in aprotic solvents (in acetonitrile and dimethylformamide) with a special stress for understanding the reduction and/or decomposition mechanism. The work has been performed at the J. Heyrovský Institute of Physical chemistry of the Academy of Sciences of the Czech Republic.