The institution	**Name**:	**Institute of Inorganic Chemistry**
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Is **interested** in the **participation in a project** that will be prepared and submitted in the following **Area** of the **Thematic Priority 6 Environment** from the Specific Work Programme Cooperation:

Specific Programme	**Cooperation**
Thematic Priority	**6 - ENVIRONMENT (INCLUDING CLIMATE CHANGE)**
Activity (number & title from the Work Programme)	**6.3. Environmental technologies**
Sub-priority (number & title from the Work Programme)	**6.3.1. Environmental technologies for observation, simulation, prevention, mitigation, adaptation, remediation and restoration of the natural and man-made environment**
Area (number & title from the Work Programme)	**6.3.1.2 Soil** **6.3.1.3 Waste**
Call (number & title from the Work Programme)	**FP7-ENV-2007-1**

Short description of the organization expertise relevant to the topic *(e.g. staff, areas of expertise and research)*

The Institute of Inorganic Chemistry has an experienced and highly qualified research team that has for many years been dealing with chemical processes of oxidation by means of ozone and with preparation of peroxide compounds applied also in environmental protection, e.g. sodium percarbonate, calcium and magnesium peroxides. These compounds, as sources of active oxygen, are used in chemical and biochemical processes of pollutant removal. The research conducted at the Institute included preparation of products with specific properties (chemical composition, granulometric composition, bulk density, stability, etc.) tailored to their application. Peroxide compounds, like ozone, may also be used for odour control. For many years the Institute has been carrying out research on the manufacture of orthophosphoric acid with the use of ozone, which in addition to eliminating odours, provided improved process conditions.

Proposed contribution to the selected Sub-Priority:

The proposed research includes preparation and application of peroxide compounds with defined properties and ozone in the processes of chemical oxidation.

Participation in relevant projects *(e.g. National Projects, FP5, FP6, INTERREG, LIFE, etc.; acronym & title)*:

The Institute did not participate in the FP5 and FP6 Programmes. The proposed subjects are associated with research that has been conducted by the Institute for many years and was financed by the State budget and domestic industry.

Relevant Publications *(Authors, title, editor, year)*:

1) B.Trefler, M.Steininger, A.Pawełczyk, Effect of ozone on the organic impurities of the Tunisian phosphorite in the dihydrate process of the phosphoric acid extraction, Chemistry for Agriculture, 2001, vol.2, pp.282-286

2) B.Trefler, A.Pawełczyk, M.Steininger, Effect of phosphorite mineral impurities on properties of the products obtained in the dihydrate process of wet phosphoric acid conducted in the presence of ozone, Chemistry for Agriculture, 2001, vol.2, pp.183-188

3) B.Trefler, B.Pisarska, D.Wójcik, M.Nowak, Utilization of waste from semi-dry flue gas desulfurization, Polish J. of Chem.Technol., 2002, vol. 4, No 1, pp.21-23

4) B.Walawska, J.Gluzińska, Effect of H2O2 concentration on the efficiency of calcium peroxide obtaining, Chemistry for Agriculture, 2006, vol.7, pp.804-808, ISBN 80-239-7759-8

5) B.Walawska, J.Gluzińska, Calcium peroxide – properties and application for protection of the environment, Chemistry for Agriculture, 2006, vol.7, pp.17-21, ISBN 80-239-7759-8

Other relevant information:

The Institute uses, among other things, a testing stand for oxidation with ozone (Ozonia OZAT CF-1 ozone generator with ozone production rate 30 g O3/h) and a testing stand for biochemical processes with a model bioreactor (KLF 2000, Bioengineering).