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<b>Contact Person</b> for this Eol	<b>Title:</b> PhD <b>First name:</b> <b>Bożenna</b> <b>Last name:</b> <b>Pisarska</b> <b>Department:</b> <b>E-mail:</b> <a href="mailto:pisarska@ichn.gliwice.pl">pisarska@ichn.gliwice.pl</a> <b>Phone:</b> +48 32 231 30 51 ext. <b>Fax:</b> +48 32 231 75 23 ext.

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:

<b>Specific Programme</b>	<b>Cooperation</b>
<b>Thematic Priority</b>	<b>6 - ENVIRONMENT (INCLUDING CLIMATE CHANGE)</b>
<b>Activity</b> (number & title from the Work Programme)	<b>6.3. Environmental Technologies</b>
<b>Sub-priority</b> (number & title from the Work Programme)	<b>6.3.1. Environmental technologies for observation, simulation, prevention, mitigation, adaptation, remediation and restoration of the natural and man-made environment</b>
<b>Area</b> (number & title from the Work Programme)	<b>6.3.1.3 Waste</b>
<b>Call</b> (number & title from the Work Programme)	<b>FP7-ENV-2007-1</b>
<b>Short description of the organization expertise relevant to the topic</b> (e.g. staff, areas of expertise and research)	
Application of membrane and electrochemical techniques in environmental protection. This subject matter is being pursued at the Institute since the mid-90's by a team of 7 researchers with a laboratory equipped with state-of-the-art equipment at their disposal. Research projects included purification of salt solutions, electrochemical metathesis, solution concentration, preparation of high purity and specialty chemicals, electrochemical treatment of liquid waste.	
<b>Proposed contribution to the selected Sub-Priority:</b>	
The proposed research, depending on specific requirements of the given process and on environmental considerations, enables treatment of liquid waste not susceptible to other treatment methods, purification of various salt solutions and preparation of chemicals of high purity and for special applications.	
<b>Participation in relevant projects</b> (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 from domestic funds.	

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

- 1) B. Pisarska, W.Gnot, A modern method for obtaining of potassium carbonate in electrolysis cells with ion exchanger membranes, Polish Journal of Applied Chemistry, 1995, vol. 39 No 1, pp.121-125
- 2) B.Pisarska, R.Dylewski Sodium sulfate processing into sulfuric acid and sodium hydroxide with the use of method of low-drade waste utilization, Chemistry for Agriculture, 2002, vol. 3, pp.161-165
- 3) B.Pisarska, R. Dylewski Synthesis of sodium o-phosphates using membrane elektrolysis, J.of Appl. Electrochem. 2002, No 32, pp.537-541
- 4) B.Pisarska, A.Sieber, R.Dylewski, Study on the possibility of sodium sulfate converting into sulfuric amid and sodium hydroxide by membrane electrolysis metod, Polish J. Chem. Technol., 2003, vol. 5, No 3, pp.42-46
- 5) B.Pisarska, R.Dylewski, Study on conditions to convert waste sodium sulfate into sulfuric acid and sodium hydroxide by membrane electrolysis, Chemistry for Agriculture, 2004, vol 4, pp.53-59
- 6) B.Pisarska, Investigations of electrodyalytiv metathiesis  $\text{Na}_2\text{SO}_4 + 2\text{KCl} \rightarrow \text{K}_2\text{SO}_4 + 2\text{NaCl}$ , Chemistry for Agriculture, 2005, vol 6, pp.945-956
- 7) B.Pisarska, Analysis of preparation conditions of  $\text{H}_2\text{SO}_4$  and  $\text{NaOH}$  from sodium sulfate solutions by electrodyalysis, Russian J. Appl. Chemistry (Z. prikl.Chim.), 2005, vol. 78, No 8, pp.1288-1294
- 8) B.Pisarska, Research into double replacement  $\text{MgSO}_4 + 2\text{KCl} \rightarrow \text{K}_2\text{SO}_4 + \text{MgCl}_2$  as electrodyalysis reaction, VI Konferencja Naukowa – Membrany i Procesy membranowe w Ochronie Środowiska – Monografie Komitetu Inżynierii Środowiska PAN 2006, vol.36, pp.229-238, ISBN 83-89293-31-5
- 9) B.Pisarska, Studies on the electrodyalysis coupled with a methatetical reaction  $\text{Na}_2\text{SO}_4 + 2\text{KCl} \rightarrow \text{K}_2\text{SO}_4 + 2\text{NaCl}$ , Przemysł Chemiczny, 2006, No 11, pp.1500-1504
- 10) B.Pisarska, Transport of coions across ion exchange membranes in electrodyalytic metathesis  $\text{MgSO}_4 + 2\text{KCl} \rightarrow \text{K}_2\text{SO}_4 + \text{MgCl}_2$ , Desalination – accepted for print
- 11) B.Pisarska, Investigation of the feasibility of applying electrodyalysis to carry into effect metathesis reaction  $\text{MgSO}_4 + 2\text{KCl} \rightarrow \text{K}_2\text{SO}_4 + \text{MgCl}_2$ , Chemistry for Agriculture, 2006, vol. 7, pp.430-438, ISBN 80-239-7759-8

**Other relevant information:**

ICHN received a number of awards for achievements in research on electrochemistry and environmental protection.