

CONTENTS

1. General Problems of the Fertilizer Industry, Agriculture and Environment Protection

- Environmental trends in fertilizer production and use	14
- Pollution control in clouds	21
- Genetically modified food – curse or chance for starvings?	28
- Ceramic Exhaust Gas Converters for Cars. Profits and losses	33
- The catalytic converters for oxidation of "Diesel Soot"	37
- Conflicts for human after end of using natural resource. An unexpected cadmium case	41
- Environmental risk assessment	48

2. Development in Agricultural Practice

- Application of organic-mineral complexes in animal	56
- Estimation of two magnesium levels in ewe rations	62
- The influence of fertilisation with glass fertiliser VI on chosen parameters of growth and development of conifers	67
- Mechanism of biochemical activity of glass fertilizers	74
- Acidification degree and macroelement content	81
- Rational (Controlled) Fertilization of Horticultural Crops	86
- Ecological aspects of utilization of herbicides in fibrous plant cultivation	96
- Fertigation of greenhouse cucumbers with insomix fertilizers	100
- Strategies for sustainable agriculture in Sweden and Poland	108
- Macroelemental interactions in the blood serum of preweaned pigs supplemented with iron and magnesium fumarates	114
- Mineral organic substrata and mineral fertilizers for selected kinds of floriculture	122
- Manufacture of NPK fertilisers by digesting phosphate rock with nitric (V) acid	129

3. Environmental impact of Fertilizer Industry and Agriculture

- Influence of mineral fertilization on fertility of the soil contaminated by Smelter Czestochowa	137
- Environmentally friendly herbicides. Do they really exist?	143
- The influence of lead ions in artificially polluted sand on the ability of <i>Steinernema feltiae</i> Filipjev to infect a host insect (<i>Galleria melonella</i> L.)	150
- Studies on biosorption properties of heavy metal ions by a blue-green algae <i>Spirulina</i> spp.	154
- Biosorption of cadmium, lead and copper ions-comparison	

between whole and disrupted cells of <i>Saccharomyces cerevisiae</i>	164
- Sources of heavy metal contamination in sulfuric acid processes	170
- Effect of phosphogypsum stockyards on fluorine accumulation in natural and agricultural environment	174

4. Technological Progress in Fertilizer Industry

- 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	183
- Production and certain physicochemical properties of ammonium polyphosphates	189
- Silicas modified with amine groups-containing silanes – adsorbents of potential organic fertilizers	192
- Silicas obtained in emulsion medium – carriers of organic compounds	197
- Production of urea-superphosphate fertilizer by way of phosphate rock decomposition with solutions containing urea, sulfuric acid and phosphoric acid	202
- Utilization of sodium sulphate in the process for manufacture of potassium sulphate	205
- Plant-scale test of sulphuric acid utilisation from acidic benzol refining in a wet-process phosphoric acid technology	210
- Sulphur – a chance for superphosphate?	218
- Production of MCP and DCP with the use of the low temperature method	224
- Possibilities of phosphorus recovery from the waste	228
- Corrosion inhibition of carbon steel in the environment of fluid fertilisers	232
- Investigations of corrosion inhibition of chromium-nickel steels in industrial cooling water systems	236
- Application of phosphonic compounds for stabilisation of industrial waters and for reducing their corrosivity	239
- Factors effected on corrosion of carbon steel in fluid fertilisers	243
- Conversion of ferric phosphates into sodium and calcium phosphates	247
- Canwil – a new product in the market of fertilisers against a background of products from other nitrate manufacturers	251
- Safety thread in coating process of multi-component fertilisers containing ammonium nitrate	255
- Utilization of fertilizer salts for manufacturing of household chemistry preparations	260
- Operating parameters of zincate bath for zinc plating compared with cyanide bath	265
- Nickel composite layers as an alternative protective/ decorative chromium coatings	269

- Weak-acid baths and cyanide bath in zinc electrodeposition process	273
- Corrosion preventing properties of zinc coatings	278
- Effect of ozone on the organic impurities of the Tunisian phosphorite in the dihydrate process of the phosphoric acid extraction	282

5. Methodology in Environmental, Technological, Agricultural and Analytical Practice

- Effect of phenomena in granular active carbon beds on the drinking water's health quality	288
- Monitoring of trace amounts of nickel with electrochemical sensor	298
- Unsubstituted organophosphonates biodegradation. C-P lyase activity studies in soil-born <i>Pseudomonas</i> strains	303
- The ability of fungal strains to degrade three model phosphonates: ciliatine, glyphosate and phosphonoaceta	307
- Physico- chemical and functional properties of magnesium-calcium ammonium nitrate mechanically granulated from Zakłady Azotowe "Kędzierzyn" S.A.	312
- Assessment on multicomponent fertiliser formulae based on polyphosphates in agricultural studies	318
- Agrochemical assessment of various granulates of dolomite fertiliser with the addition of NPK and dolomite without additives	322
- Utilization of waste lactose using biomembrane processes	326
- Application of simultaneous thermogravimetry and mass spectrometry in wastes components' identification	332
- Concept of waste minimalization in textile dyehouses	338
- Bioremediation of a contaminated refinery dumping site: analysis for mineral oils and microbial characterisation of sludge samples	343
- Biodegradability of fertilizer microelement complexing agents	354
- An application of plasma spectrometry ICP-OES and ICP-MS for metal content analysis in biological and environmental samples	359