

CONTENTS

I. NEW IMPROVED MINERAL FERTILIZERS

J. Hoffmann, H. Górecka, K. Hoffmann, R. Kolacz, ASSESSMENT OF PHYSICOCHEMICAL PROPERTIES OF RAW HALLOYSITE	13
A. Biskupski, P. Malinowski, T. Koziol, F. Prokuski, TEST OF FAST CAKING OF FERTILIZERS	20
B. Walawska, J. Hoffmann, IDENTIFICATION OF PROCESSES OCCURING DURING THERMAL CONVERSIONS OF UNPK FERTILIZERS	26
A. Biskupski, P. Malinowski, INFLUENCE OF ADDITIVES ON THERMAL STABILITY OF AN TYPE FERTILIZERS	31
M. Borowiec, J. Hoffmann, NEW BIODEGRADABLE CHELATING COMPOUNDS FOR MICRONUTRIENT FERTILIZERS	38
M. Dziegielewska, G. Kaup, THE COMPARISON OF THE EFFECT OF THE CHOSEN INSECTICIDES AND BIOPREPARATION WITH INSECTICIDAL NEMATODES ON LETHALITY OF THE HORSE CHESTNUT LEAFMINER <i>CAMERARIA OHRIDELLA</i>	42
W. Grzebisz, B. Cichy, M. Biber, POLYPHOSPHATE FERTILIZERS – A NEW CONCEPT OF CROPS FERTILIZATION WITH PHOSPHORUS	46
P. Grzesiak, M. Grobela, R. Motala, A POSITION OF GAS PURIFICATION TECHNIQUES IN METALLURGIC TYPE OF SULFURIC ACID INSTALLATIONS WITH REFERENCE TO EUROPEAN UNION BAT (BEST AVAILABLE TECHNIQUES)	54
K. Heller, S. Rólski, LENMIX 80 EC - NEW, LINSEED OIL BASED, ADJUVANT FOR INCREASING HERBICIDE ACTIVITY IN CORN	59
J. Hoffmann, K. Hoffmann, FODDER PHOSPHATES – INFLUENCE OF PROCESS PARAMETERS ON THEIR PHYSICOCHEMICAL PROPERTIES	63
P. Malinowski, A. Biskupski, PREPARATION METHODS AND PROPERTIES OF UREA AND MAGNESIUM SULPHATE ADDUCT	68
D. Mikla, J. Hoffmann, K. Hoffmann, PROPERTIES OF SELECTED CLAYEY MINERALS APPLICABLE FOR SUSPENSION FERTILIZERS ANUFACTURE	74
J. Soloducho, J. Cabaj, SENSORS FOR TOXIC GASES	81

M. Szumera, I. Wacławska, J. Ostrowska, SLOW RELEASE GLASSY FERTILIZERS AS ARTIFICIAL SOILS FOR AGRICULTURE	88
M. Tomaszewska, A. Jarosiewicz, PREPARATION OF POLYMER COATED FERTILIZER USING SPRAYING METHOD	98

II. AGRICULTURAL PRACTICE

P. Barłóg, W. Grzebisz, J. B. Diatta, EFFECT OF TIMING AND NITROGEN FERTILIZERS ON NUTRIENTS CONTENT AND UPTAKE BY WINTER OILSEED RAPE. PART I. DRY MATTER PRODUCTION AND NUTRIENTS CONTENT	102
P. Barłóg, W. Grzebisz, J. B. Diatta, EFFECT OF TIMING AND NITROGEN FERTILIZERS ON NUTRIENTS CONTENT AND UPTAKE OF WINTER OILSEED RAPE. PART II. DYNAMICS OF NUTRIENTS UPTAKE	113
H. Sztuder, M. Świerczewska, EVALUATION OF THE EFFICIENCY OF FOLIAR APPLICATION ON WINTER RAPE	124
M. Świerczewska, H. Sztuder, AGROCHEMICAL AND ECONOMICAL ASPECTS OF COMBINED APPLICATION OF AGROCHEMICALS IN SPRING WHEAT CULTIVATION	130
B. Breza-Boruta, Z. Paluszak, J. Bauza-Kaszewska, THE INFLUENCE OF VARIOUS FERTILIZATION SYSTEMS ON THE OCCURRENCE OF PROTEOLYTIC MICROORGANISMS	135
P. Burczyk, R. Gamrat, THE FATE OF NITROGEN IN STRIP INTERCROPPING SYSTEM	142
A. Demczuk, K. Marczevska, E. Sacala, E. Grzyś, SENSITIVITY INDEX OF DIFFERENT CUCUMBER VARIETIES TO SULFONYLUREA HERBICIDES	155
B. Gawdzik, M. Szczepanik, A. Prączyńska, J. Nawrot, B. Gabryś, K. Dancewicz, C. Wawrzeńczyk, LACTONES 24 [1]. SYNTHESIS AND FEEDING - DETERRENT ACTIVITY OF γ-LACTONES WITH DIETHYL PHOSPHONATE MOIETY	162
M. Gibczyńska, M. Galczyńska, N. Mocarski, RELATIONSHIP OF PHOSPHATASE ACTIVITY AND AVAILABLE PHOSPHORUS CONTENT IN SOILS WITH DIFFERENT ORGANIC MATTER CONTENT	174
E. Grzyś, E. Sacala, A. Demczuk, EFFECT OF SALICYLIC ACID ON THE PHYTOTOXICITY OF DIQUAT IN CUCUMBER SEEDLINGS	181
G. Kaup, A. Kiepas-Kokot, MINERAL COMPOSITION OF TOMATO FRUITS CULTIVATED ON BEDS WITH SEWAGE SLUDGE COMPOST AND VERMICOMPOST IN THE PRESENCE OF SAPROPHYTIC ORGANISMS	187

S. Kinal, M. Hadryś, B. Čermak, B. Lubojemska, ESTIMATION OF SOLUBILITY OF VARIOUS CHEMICAL FORMS OF ZINC, COPPER AND MANGANESE IN RUMINANTS FEEDING	192
S. Kinal, B. Lubojemska, A. Korniewicz, M. Golonka, VARIOUS CHEMICAL FORMS OF ZINC AND MANGANESE IN CONCENTRATE MIXTURES FOR LAMBS. DIGESTIBILITY COEFFICIENTS OF NUTRIENTS AND NITROGEN BALANCE. PART I.	199
S. Kinal, A. Korniewicz, B. Lubojemska, M. Hadryś, APPARENT ABSORPTION AND RETENTION OF CALCIUM, PHOSPHORUS AND MAGNESIUM. PART II	206
S. Kinal, A. Korniewicz, B. Lubojemska, M. Hadryś, VARIOUS CHEMICAL FORMS OF ZINC AND MANGANESE IN CONCENTRATE MIXTURES FOR LAMBS. PART III. APPARENT ABSORPTION AND RETENTION OF ZINC, COPPER AND MANGANESE	212
C. Wołoszyk, J. Krzywy, THE INFLUENCE OF VARIOUS COMPOSTS FROM PREPARED POTATO PULP WITH ADDITION OF COMPONENTS ON SOME SOIL FERTILITY FEATURES AFTER CULTIVATION OF PLANTS. PART I. SOIL PH, CONTENT OF ORGANIC CARBON, TOTAL NITROGEN AND C:N RATIO IN SOIL AFTER HARVEST OF SPRING RAPE AND SPRING TRITICALE	219
J. Krzywy, C. Wołoszyk, THE INFLUENCE OF COMPOSTS PREPARED FROM POTATO PULP WITH ADDITION OF DIFFERENT COMPONENTS ON SOME SOIL FERTILITY FEATURES AFTER CULTIVATION OF PLANTS. PART II. TOTAL CONTENT AND AVAILABLE FORMS OF PHOSPHORUS, POTASSIUM AND MAGNESIUM IN SOIL AFTER CULTIVATION OF SPRING RAPE AND SPRING TRITICALE	227
A. Lis-Krzyżcin, I. Waclawska, FERTILISATION OF <i>PELARGONIUM HORTORUM</i> WITH SLOW RELEASE FERTILISERS. I. EFFECT ON PLANT PARAMETERS	234
A. Lis-Krzyżcin, I. Waclawska, FERTILISATION OF <i>PELARGONIUM HORTORUM</i> WITH SLOW RELEASE FERTILISERS. II. EFFECT ON THE CONTENT OF COMPONENTS IN THE SUBSTRATE AND IN PLANTS	242
K. Mazurkiewicz – Zapalowicz, K. Janowicz, W. Michalcewicz, L. Startek, A. Bartkowiak, P. Żurawik, EFFECT OF CHITOSAN ON THE FUNGI CAUSING CORM ROT IN THE FREESIA	248
S. Rólski, K. Heller, THE EFFECT OF SO_4^{2-} AND Cl^- ANIONS ON FIBRE FLAX GROWING, DEVELOPMENT AND YIELDING CAPACITY	255
L. Sas Paszt, B. Z. Jarociński, THE EFFECT OF MICRO-ELEMENT FERTILIZERS ON THE VEGETATIVE GROWTH OF STRAWBERRY PLANTS CV. 'SENGA SENGANA'	260
W. Szczepaniak, R. Musolf, INFLUENCE OF POTASSIUM FERTILIZATION ON YIELD AND TECHNOLOGICAL QUALITY OF WINTER WHEAT IN VIEW OF DIFFERENTIATED WATER CONDITIONS. PART I. GRAIN YIELD	265

W. Szczepaniak, R. Musolf, INFLUENCE OF POTASSIUM FERTILIZATION ON YIELD AND TECHNOLOGICAL QUALITY OF WINTER WHEAT IN VIEW OF DIFFERENTIATED WATER CONDITIONS. PART II. YIELD STRUCTURE	271
W. Szczepaniak, R. Musolf, INFLUENCE OF POTASSIUM FERTILIZATION ON YIELD AND TECHNOLOGICAL QUALITY OF WINTER WHEAT IN VIEW OF DIFFERENTIATED WATER CONDITIONS. PART III. TECHNOLOGICAL QUALITY	276

III. CONTAMINATION OF AGROSYSTEM AND FOOD

H. Górecka, K. Chojnacka, Z. Dobrzański, H. Górecki, BIOAVAILABILITY OF NUTRIENTS AND HEAVY METALS TO PLANTS FROM SOIL DEACIDIFIED BY WOOD ASH	281
Z. Dobrzański, H. Górecka, K. Chojnacka, H. Górecki, R. Kolacz, A. Bartkowiak, S. Opaliński, THE APPLICATION OF ALUMINOSILICATE-HUMIN PREPARATION FOR THE REDUCTION OF CADMIUM ACCUMULATION IN BLOOD AND MILK OF COWS	288
V. Kmecl, A. Gregorčič, J. Sušin, H. Baša Česnik, NITRATE AND NITRITE CONTENT IN SLOVENIAN FRUIT AND VEGETABLE	293
S. Baran, A. Wójcikowska-Kapusta, P. Oleszczuk, G. Żukowska, CONTENT OF CHOSEN HEAVY METALS IN SOILS AND COMMON DANDELION (<i>TARAXACUM SP.</i>) FROM AREAS AFFECTED BY DIVERSE ANTHROPOPRESSURE	298
S. Baran, P. Oleszczuk, DANGERS RESULTING FROM MIGRATION OF POLYCYCLIC AROMATIC HYDROCARBON IN SEWAGE SLUDGE-AMENDED LIGHT SOIL'S PROFILE	306
R. Bodkowski, B. Patkowska-Sokoła, W. Walisiewicz-Niedbalska, SUPPLEMENTATION OF THERMALLY PROCESSED RAPE SEEDS AS THE METHOD OF DEODORIZATION AND IMPROVEMENT OF MEAT QUALITY OF LAMB MEAT	311
R. Bodkowski, B. Patkowska-Sokoła, W. Walisiewicz-Niedbalska, P. Jonkisz, THE EFFECT OF HEATING OF RAPE SEEDS ON THE REDUCTION OF CHANGES IN THE PROFILE OF ITS FATTY ACIDS IN RUMINANTS RUMEN	317
T. Cabaj, THE ANALYSIS OF CADMIUM, MERCURY AND LEAD CONTENT IN HEARTS OF WILD PIGS (<i>SUS SCROFA</i>) AND DOMESTIC PIGS (<i>SUS SCROFA DOMESTICA</i>) ON THE AREA OF WEST POMERANIA	324
K. Chojnacka, BIOACCUMULATION – THE FUNDAMENTALS OF THE PROCESS	329
K. Chojnacka, BIOSORPTION – THE FUNDAMENTALS OF THE PROCESS	336

J. Czekala, Z. Spiak, L. Wall, CONTENT AND COMBINATIONS OF FORMS OF IRON AND MANGANESE IN SOILS CONTAMINATED WITH CHROMIUM	342
R. Dobromilska, E. Rekowski, INFLUENCE OF SHIELDS ON YIELD AND NITRATE CONTENT IN SELECTED VEGETABLE SPECIES	351
M. Galczyńska, M. Gibczyńska, N. Mocarcki, CONTENT OF INORGANIC PHOSPHORUS COMPOUNDS IN SOILS AND CONTENT OF ORTHOPHOSPHATES(V) IN WATERS IN SELECTED AREAS OF THE WEST POMERANIA	358
R. Gamrat, M. Galczyńska, CHEMISM CHARACTERISTICS OF WATERS OF WATER HOLES IN ASPECT OF THEIR LOCALIZATION AND DOMINATING WATER AND SWAMP SPECIES	364
M. Gibczyńska, M. Galczyńska, J. Klimek, N. Mocarcki, CONTENT OF ORGANIC AND INORGANIC PHOSPHORUS COMPOUNDS IN SOILS OF WEST POMERANIA	369
D. Jamroz, J. Kubizna, T. Wertelecki, FEED SUPPLEMENTS SUPPORTING THE IMMUNE SYSTEM FUNCTIONS IN ANIMALS	375
M. Janczak, J. Popiel, J. Nicpoń, R. Bodkowski, B. Patkowska-Sokoła, ANALYSIS OF THE COMPOSITION OF SUMMER AND WINTER COAT OF FAIR GAME FOR THE CONTENT OF HEAVY METALS	384
J. Jarmul, M. Kamionek, THE EFFECT OF CADMIUM AND LEAD IN CONTAMINATED SOIL ON THE POPULATION OF ENTOMOPATHOGENIC NEMATODES IN THE HOST'S (<i>GALLERIA MELLONELLA</i> L.) BODY	389
B. Z. Jarociński, ASSESSMENT OF THE MACRO- AND MICRO-ELEMENT CONTENT IN THREE LAYERS OF THE SOIL PROFILE IN THE FIELDS AND ON STRAWBERRY PLANTATIONS	394
A. Kaczor, M. S. Brodowska, THE CHANGES IN THE CONTENT OF POTASSIUM, MAGNESIUM AND CALCIUM IN RAPE AND WHEAT FERTILIZED BY DIFFERENT FORMS OF NITROGEN AND POTASSIUM	401
A. Kiepas – Kokot, H. Wronkowska, M. Dziegielewska, INFLUENCE OF HIGH CONCENTRATIONS OF HEAVY METALS RESULTING FROM LONG TERM INDUSTRIAL ACTIVITY ON OCCURRENCE OF MICROORGANISMS IN SOIL	407
T. Kitzczak, A. Kiepas-Kokot, A. Stelmaszyk, THE CHEMICAL AND FLORISTIC CONTENT OF PASTURE COVER UNDER VARIED SOIL CONDITIONS	413
B. Kolwzan, THE GENOTOXICITY OF SOIL POLLUTED BY EXPLOSIVES	419
E. Leśniewska, M. I. Szykowska, J. Albińska, T. Paryjczak, DETERMINATION OF CHOSEN ELEMENTS IN BAKERY PRODUCTS	424
A. Pawelczyk, RESEARCH ON DISTRIBUTION OF NITROGEN CONTENT IN PROFILE OF HUMOUS SOILS	432

A. Pawelczyk, STUDY ON BASIC INDICES OF SURFACE WATERS POLLUTION ON AGRICULTURAL AREA	438
J. Podlasińska, T. Kucharska, B. Wójcikowska, A. Nowak, MACROELEMENTS IN MUSHROOMS FROM LIPKI DISTRICT	444
J. Podlasińska, J. Chudecka, T. Tomaszewicz, S. Stankowski, TOTAL MERCURY CONTENT IN ANTHROPOGENIC SOIL IN FIRST YEAR OF ITS FUNCTIONING	452
J. Potarzycki, M. Wojtylak, ASSESSMENT OF HEAVY METAL CONTENT IN SOILS OF VARIOUS MANAGEMENT SYSTEM	458
J. Rosada, J. Grzesiak, P. Grzesiak, G. Schroeder, A. Orlicka, I. Ratajczak, Iwona Rissmann, THE APPLICATION OF AAS AND ICP TECHNIQUES FOR THE SPECIATION OF TRACE METALS INSULATED BY SEQUENTIAL CHEMICAL EXTRACTION	464
W. Spychalski, TRACE ELEMENTS CONTENT IN SOILS OF GREEN AREAS OF POZNAŃ CITY	478
W. Spychalski, J. Rosada, ZINC IN SOILS FROM THE EMISSION ZONE OF THE GŁOGÓW COPPER SMELTER AND THEIR SPECIATION BY SEQUENTIAL EXTRACTION	484
Z. Spiak, Ł. Wall, IRON AND NICKEL CONTENT IN PLANTS AND SERPENTINE SOILS OF LOWER SILESIA (DOLNY ŚLĄSK)	490
S. Strączyński, S. Strączyńska, BIOACCUMULATION OF TRACE ELEMENTS BY FIELD PEA CULTIVATED IN THE REGION POLLUTED BY COPPER METALLURGICAL INDUSTRY	498
S. Strączyński, H. Sztuder, M. Świerczewska, EVALUATION OF SOIL-GROUND WATER QUALITY FROM WINTER RAPE FIELDS FERTILIZED WITH FLUID FERTILIZERS	505
S. Szczepaniak, H. Paelinck, Ch. Gyselinck, H. Gorecki, ANTIMICROBIAL PRODUCTS OF NATURE IN MEAT PRESERVATION	509
S. Szczepaniak, S. Yayla, H. Paelinck, OCCURRENCE OF <i>STAPHYLOCOCCUS AUREUS</i> IN SEMI-DRY CHEESE PREPARED OF RAW MILK	524
M. I. Szynkowska, J. Albińska, E. Leśniewska, T. Paryjczak, DETERMINATION OF CHOSEN ELEMENTS IN DIFFERENT SPECIES OF FISH	533
T. Tomaszewicz, J. Podlasińska, K. Pacewicz, DIFFERENTIATION OF MERCURY CONTENT IN LIGHT SOILS UNDER DIFFERENT LAND USE – ARABLE AND FALLOW LANDS	538
T. Trziszka, Z. Dobrzański, W. Drymel, M. Kaźmierska, FOOD DESIGN – ENRICHMENT OF EGGS WITH BIOLOGICALLY ACTIVE SUBSTANCES	547

Z. Usydus, L. Polak-Juszczak, Z. Dobrzański, THE CONTENT OF LEAD IN BALTIC FISHES FISHED IN THE YEARS 2001-2003	557
W. Wasilewicz-Niedbalska, H. Gwardiak, B. Patkowska-Sokoła, R. Bodkowski, THE CONTENT OF OROTIC ACID IN WHEY FROM MILK OF RUMINANTS	561
J. Wybieralski, THE EFFECT OF FORMULATION OF 2-ISOPROPOXY-PHENYL-N-METHYLCARBAMATE ON LEACHING AS A FUNCTION OF SOIL PROPERTIES	564
J. Zalejska-Fiolka, M. Podgórna, M. Stefaniak, THE INFLUENCE OF TETRAPHENYLPORPHYRIN AND ITS METALLODERIVATIVES ON THE OXIDATION REACTION OF EDIBLE OILS	570
M. Żuber, AGROTERRORISM – THREATS AND PREPAREDNESS	576
J. Czekala, L. Mielnik, W. Spychalski, TOTAL CONTENT OF MANGANESE AND ITS CHEMICAL FORMS IN BOTTOM OF LAKES	589
Z. Usydus, L. Polak-Juszczak, Z. Dobrzański, THE CONTENT OF CADMIUM IN BALTIC FISHES FISHED IN THE YEARS 2001-2003	595
B. Mendyka, W. Walkowiak, A. Czarny, E. Zaczyńska, M. Pawlik, A. Wargadzka, P. Radek, THE EFFECT OF BIODIESEL EXHAUST COMPOSITION ON A HUMAN LUNG CELLS	599
L. Wall, Z. Spiak, RESEARCH ON MACRONUTRIENTS AND CHROMIUM CONTENT IN PLANTS AND SERPENTINE SOIL IN LOWER SILESIA (DOLNY ŚLĄSK)	607

IV. WASTE UTILIZATION

A. Pawelczyk, AGRICULTURAL UTILIZATION OF ORGANIC WASTE IN EUROPEAN LEGISLATION	615
P. Grzesiak, G. Schroeder, THE STUDIES OF THE STORAGE AND UTILIZATION POSSIBILITY OF USED VANADIUM CATALYSTS WITH RESPECT TO ENVIRONMENT PROTECTION	622
B. Grzmil, J. Wronkowski, STUDY ON PRECIPITATION OF THE LOW FLUORIDE PHOSPHATES FROM FERTILIZER WASTEWATER	627
J. Chudecka, T. Tomaszewicz, S. Stankowski, A. Birus, PHYSICAL AND CHEMICAL PROPERTIES OF ANTHROPOGENIC SOILS MADE ON BASE OF ASH-SLAGS ON EXPERIMENTAL OBJECT IN POWER STATION DOLNA ODRA S.A. (NOWE CZARNOWO, DISTRICT ZACHODNIOPOMORSKIE) IN FIRST YEAR OF ITS FUNCTIONING	631

E. Dusza, A. Kiepas – Kokot, K. Stępień, COURSE OF COMPOSTING PROCESS OF PLANT CULTIVATION WASTE AND THE ASSESSMENT OF THE OBTAINED COMPOSTS	640
P. Falewicz, I. Dreła, B. Szczygiel, UTILIZATION OF WASTE ORGANIC N- AND P-CONTAINING COMPOUNDS FOR MANUFACTURING MULTIFUNCTIONAL CORROSION INHIBITORS	650
I. Anissimo, J. Hoffmann, CHEMICAL, MICROBIOLOGICAL AND VEGETATION TESTS OF COMPOSTS FROM POST-SLAUGHTER WASTES	656
K. Fela, A. K. Nowak, S. Żelazny, UTILIZATION OF FLOTATION TAILINGS GENERATED IN Zn-Pb ORE MINING FOR MAGNESIUM SULFATE PRODUCTION	661
J. Gluzińska, J. Hoffmann, J. Kwiecień, PRECIPITATED STRUVITE AS THE SOURCE OF PHOSPHORUS FOR PLANTS	670
K. Gorazda, M. Jodko, Z. Kowalski, Z. Wzorek, PHOSPHORUS COMPOUNDS RECOVERY FROM SEWAGE SLUDGE	676
K. Hoffmann, J. Hoffmann, K. Łucka, STUDIES OF THE EFFECT OF SOIL FERTILIZATION WITH YEAST INDUSTRY WASTES	684
G. Kaup, M. Dziegielewska, CO-OCCURENCE OF <i>GLOBODERA ROSTOCHIENSIS</i> (WOLL.) BEHRENS AND <i>PENICILLIUM FREQUENTANS</i> WESTLING IN BEDS WITH THE COMPOST OBTAINED FROM MUNICIPAL SEWAGE SLUDGE	691
E. Krzywy, C Wołoszyk, T. Mazur, J. Krzywy, CHANGES IN CONTENTS OF CALCIUM, MAGNESIUM AND SULPHUR DURING DECOMPOSITION OF COMPOSTS PREPARED FROM POTATO PULP WITH ADDITION OF MUNICIPAL SEWAGE SLUDGE, STRAW AND SAWDUST	695
W. Mulak, B. Miazga, HYDROCHLORIC ACID LEACHING OF SPENT NICKEL OXIDE CATALYSTS	701
Z. Paluszak, B. Szala, J. Bauza-Kaszewska, J. Hermann, INACTIVATION OF SELECTED INDICATOR MICROORGANISMS IN THE COMPOSTING PROCESS OF SEWAGE SLUDGE	708
M. Pashkevich, M. Parshina, I. Gaidomako, O. Galankina, ESTIMATION OF NEGATIVE INFLUENCE OF SMELTING PROCESS WASTE	715
A. Pawelczyk, B. Trefler, LEGISLATIVE AND ECONOMICAL ASPECTS OF UTILIZATION OF ASBESTOS AND ASBESTOS CONTAINING MATERIALS	720
M. Stechman, M. Legutko, FLUORINE GASES UTILIZATION IN CRYOLITE TECHNOLOGY AS A METHOD OF MINERAL FERTILIZERS "CLEAN" PRODUCTION	727

A. Wójcikowska-Kapusta, S. Baran, G. Żukowska, E. Baranowska, CHANGES OF CADMIUM, CHROMIUM AND NICKEL CONTENT DURING SEWAGE SLUDGE COMPOSTING PROCESS	732
S. Żelazny, A. Kozak, A. Jarosiński, K. Fela, STUDIES ON MAGNESIUM COMPOUND RECOVERY FROM WASTEWATER DURING MAGNESIUM REMOVAL FROM SPHALERITE BY APPLICATION OF ION-EXCHANGE RESIN	736
M. Jakubus, W. Spychalski, IRON QUANTITATIVE CHANGES IN THE SOIL FERTILISED WITH SEWAGE SLUDGE IN RELATION TO THE EXTRACTION SOLUTION	743
Z. Paluszak, J. Bauza-Kaszewska, J. Hermann, USING ENTEROCOCCI IN MICROBIOLOGICAL ASSESSMENT OF SEWAGE SLUDGE COMPOSTING EFFECTIVENESS	750

V. ENVIRONMENT PROTECTION, NEW PROCESSES

J. Baron, S. Chrupek, S. Kandefer, M. Olek, M. Pilawska, J. Porzuczek, J. Wrona, W. Żukowski, SMALL SCALE INCINERATOR FOR BIOMASS, WITH A BUBBLING FLUIDIZED BED. I. COMBUSTION OF SEWAGE SLUDGE	756
A. Pawelczyk, RESEARCH ON REGENERATION OF SPENT CLINOPTILOLITE ZEOLITE AFTER TREATMENT OF PIG BREEDING SEWAGE	765
S. Baran, A. Wójcikowska-Kapusta, G. Żukowska, T. Milczarek, USEFULNESS OF COMPOSTED SEWAGE SLUDGE AND POST-FLOTATION LIME IN BIOLOGICAL RECLAMATION OF SOILS DEGRADED BY INTENSE ACIDIFICATION	773
R. Buczkowski, B. Dejewska, W. Kujawski, B. Igliński, BIODEGRADATION OF THE SELECTED PETROL COMPONENTS IN SOIL	777
R. Buczkowski, T. Szymański, B. Igliński, IMMOBILIZING SUBSTANCES FOR THE PROTECTION OF PLANTS AGAINST HEAVY METALS MIGRATION	782
E. Karpenko, N. Lisova, N. Scheglova, R. Vildanova, T. Pokynbroda, Z. Hamkalo, PERSPECTIVES OF USING ECOLOGICALLY SAFE SURFACTANTS IN AGRICULTURE	786
M. Klimek-Ochab, A. Obojska, E. Żymańczyk-Duda, M. Brzezińska-Rodak, P. Majewska, B. Lejczak, CHARACTERIZATION OF DEGRADATIVE ACTIVITY OF <i>VERTICILLUM SP.</i> ISOLATE TOWARDS CILIATINE	793
B. Kołwzan, W. Adamiak, A. Czarny, P. Jadczyk, M. Pawlik, BIOLOGICAL ACTIVITY OF AIRBORNE PARTICULATE PM 10 IN THE CENTRE OF WROCLAW (POLAND)	798

M. Konopka, Z. Kowalski, INVESTIGATION ON KINETIC OF THE REACTION OF REDUCTION OF Cr(VI) TO Cr(III) IN LOW CONCENTRATED CHROMIC WASTEWATERS WITH USE OF HYDROGEN PEROXIDE AS A REDUCTION AGENT	804
M. Kubasiewicz-Ponitka, S. Mielczarski, A. Trusek-Holownia, REMOVAL OF HYDROPHOBIC ORGANIC COMPOUNDS FROM AGROCHEMICAL INDUSTRY WASTEWATERS	809
B. Lüning, P. Wlazlo, B. Wierzbowska, ALTERNATIVE TECHNOLOGY OF DRY DESULPHURIZATION PROCESS	816
J. Mazur, WATER CONSUMPTION AND MANURE PRODUCTION IN INTENSIVE REARING OF PIGS	824
B. Paczosa-Bator, T. Błaż, J. Migdalski, A. Lewenstam, CONDUCTING POLYMER FILMS MODIFIED BY ACTIVE LIGANDS AS MODEL TO STUDY PROPAGATION OF BIOLOGICAL MEMBRANE POTENTIAL WITH TIME	830
G. Poźniak, R. Poźniak, M. Bryjak, REMOVAL OF 2,4-D HERBICIDE FROM AQUEOUS MEDIA BY MEMBRANE SEPARATION TECHNIQUES	840
B. Szczygiel, A. Waligóra, ELECTROKINETIC REMOVAL OF HEAVY METALS FROM SOIL – ISOTACHOPHORETIC EVALUATION OF HISTIDINE AS COMPONENT OF LEADING ELECTROLYTE SOLUTION AND METAL IONS COMPLEXING AGENT	846
A. Trusek-Holownia, S. Mielczarski, M. Kubasiewicz-Ponitka, A. Noworyta, AN INTEGRAL PROCESS OF THE ORGANIC COMPOUNDS BIODEGRADATION	852
J. Wereszczaka, T. Tomaszewicz, DIRECT DRILLING EFFECT ON THE PHYSICAL AND CHEMICAL PROPERTIES OF SANDY SOIL	857
T. Krzyśko-Łupicka, THE EFFECTS OF N-(2- PIRYDYLOAMINO) METHYLENOBISPHOSPHONIC ACID ON ACTIVITY OF SOIL MICROORGANISMS	863
J. Rosada, J. Grzesiak, G. Schroeder, AGRICULTURAL RECLAMATION OF SOILS CONTAMINATED BY HEAVY METALS COMING FROM INDUSTRIAL EMISSIONS	869

VI. CHEMICAL ENGINEERING, TECHNOLOGY AND APPARATUS, GENERAL PROCESSES

W. Arabczyk, I. Jasińska, MODIFICATION OF THE METAL SURFACE BY STRUCTURAL PROMOTERS	873
A. Matynia, B. Wierzbowska, J. Koralewska, K. Piotrowski, Z. Bechtold, E. Ćwiertnia, DTM TYPE CRYSTALLIZER WITH JET PUMP IN REACTION CRYSTALLIZATION PROCESS – A NOVEL EFFICACIOUS APPROACH	879

Z. Bechtold, M. Malasińska, J. Koralewska, K. Piotrowski, A. Matynia, THE INFLUENCE OF SUSPENSION PROPERTIES ON THE MINIMAL POWER OF FEEDING STREAM IN THE DTM MSMPR CRYSTALLIZER WITH JET PUMP	887
I. Drela, P. Falewicz, B. Szczygiel, APPLICATION OF WASTE PHOSPHONATE AND AMINOPHOSPHONATE COMPOUNDS AS SCALE FORMATION INHIBITORS IN WATER SYSTEMS	894
J. Habdas, PORPHYRINS AS DEHALOGENATING AGENTS	899
J. Habdas, B. Boduszek, SYNTHESIS AND SPECTROSCOPIC PROPERTIES OF AMINOPHOSPHONATE DERIVATIVES OF PORPHYRINS	905
P. Falewicz, I. Drela, B. Szczygiel, A. Sobianowska, EVALUATION OF C2-C6 ALKYLPHOSPHONIC AND AMINOPHOSPHONIC ACIDS AS CORROSION INHIBITORS	909
W. Hędzielek, B. Sikorska, L. Domka, A. Kozak, R. Szafarczyk, THE EFFECT OF MODIFICATION OF TITANIUM SURFACE BY HCl/H₂SO₄	914
R. J. Kaleńczuk, A. Ciarka, PARTIAL OXIDATION OF METHANE OVER SILICA SUPPORTED MOLYBDENUM CATALYST. EFFECT OF DIFFUSION ON SELECTIVITY	919
B. Kucharczyk, J. Zabrzeński, ACTIVITY OF MONOLITHIC CATALYSTS Pd/Al₂O₃ AND OXIDE CATALYSTS IN COMBUSTION OF METHANE	923
B. Kucharczyk, J. Zabrzeński, OXIDATION OF CARBON OXIDE ON MONOLITHIC PEROVSKITE CATALYSTS La_{1-x}M_xCoO₃ (M=Pd, Pt, Ag).	927
I. Lenarczyk, W. Arabczyk, R. Wróbel, STUDY OF THE QUASISTATIONARY STATES IN NANOCRYSTALLINE Fe - NH₃ - N₂ SYSTEM	932
K. Piotrowski, J. Koralewska, A. Matynia, B. Wierzbowska, ESTIMATION OF THE NUCLEATION AND GROWTH RATES OF SPARINGLY SOLUBLE SALTS FROM THE CRYSTAL SIZE DISTRIBUTIONS - KINETIC MODELS AND THEIR APPLICATIONS	937
B. Pisarska, INVESTIGATIONS OF ELECTRODIALYTIC METATHESIS Na₂SO₄ + 2KCl → K₂SO₄ + 2NaCl	945
M. Podgórna, M. Stefaniak, CHROMATOGRAPHIC DETERMINATION OF TRANSFORMATION OF TETRAPHENYLPORPHYRIN Zn(II) IN TETRAPHENYLPORPHYRIN Cu(II)	957
J. Rokita, B. Cichy, THE CORROSION PROCESSES IN CARBON STEEL IN FLUID FERTILIZER ENVIRONMENT	961
B. Szczygiel, P. Falewicz, I. Drela, D. Kriesel, APPLICATION OF WASTE PHOSPHONIC AND AMINOPHOSPHONIC ACIDS AS ADDITIONS FOR ELECTROPLATING BATHS	966
A. Witek, B. Kurczewski, M. Radziejowska, M. Hatałski, A. Kołtuniewicz, MICELLAR ENHANCED ULTRAFILTRATION OF P-CRESOL	972

B. Łęska, G. Schroeder, THE SYNTHESIS AND APPLICATION OF Si- AND P-PODANDS WITH LIPID PROPERTIES	976
M. Stefaniak, COMPARISON OF CHROMATOGRAPHIC SEPARATION OF SELECTED PORPHYRINS AND THEIR METALLODERIVATIVES BY TLC AND HPLC	984
A. Niestrój, M. Stefaniak, SEPARATION OF STEARIC ACID AND ITS DERIVATIVES BY THIN-LAYER CHROMATOGRAPHY	990
J. Wyrwał, G. Schroeder, NEW N-SUBSTITUTED POLYAZAMOACROCYCLES AS BIOLOGICAL SYSTEMS	995
E. Żymańczyk-Duda, M. Brzezińska-Rodak, P. Majewska, M. Klimek-Ochab, B. Lejczak, THE INFLUENCE OF PERMEABILIZATION ON THE REDUCTIVE ACTIVITY OF FUNGI	1002
K. Grabas, A. Żebrowski, THE GANGUE DUMP OF THE URANIUM MINE „RADONIÓW” AS A SOURCE OF RADIOACTIVE CONTAMINATION	1006
A. Dudkowiak, E. Staśkowiak, DEPOPULATION OF CHLORINS' EXCITED STATE STUDIED BY TIME-RESOLVED THERMAL AND OPTICAL SPECTROSCOPIES	1013
A. Kiepas-Kokot, T. Kitzczak, M. Dziubak, B. Świątkowska, CHEMICAL PROPERTIES OF DIVERSIFICATED PASTURE SITES SOILS	1019
Z. Dobrzański, H. Górecka, K. Chojnacka, H. Górecki, R. Kołacz, A. Bartkowiak, THE APPLICATION OF DIETARY ALUMINOSILICATE-HUMIN MIXTURE FOR THE REDUCTION OF LEAD ACCUMULATION IN BLOOD AND MILK OF COWS	1025

I. NEW IMPROVED MINERAL FERTILIZERS