PROJECT REFERENCE	PROJECT ACRONYM	PROJECT TITLE	KEYWORDS	ABSTRACT	PI SURNAME	PI NAME	PI 2 NAME & SURNAME	RESEARCH INSTITUTION	DEPARTMENT	CENTRE	START DATE	END DATE	FUNDING AGENCY	COUNTRY
108Y120		INVESTIGATION OF BIOLOGICAL NITROGEN REMOVAL FROM WASTEWATERS WITH THE ANAEROBIC AMMONIUM OXIDATION (ANAMMOX) PROCESS	ACTIVATED SLUDGE; ANAEROBIC AMONNIUM OXIDATION (ANAMMOX); BIOLOGICAL TREATMENT; NITROGEN REMOVAL	NOWADAYS, THE PROTECTION OF THE RECEIVING WATER BODIES HAS GAINED GREAT IMPORTANCE AND HENCE THERE ARE VERY STRINGENT DISCHARGE LIMITS FOR NITROGEN, WHICH CAUSES SERIOUS ENVIRONMENTAL PROBLEMS ESPECIALLY EUTROPHICATION. THEREFORE, IN RECENT YEARS, THE NITROGEN REMOVAL FROM WASTEWATERS HAS RECEIVED GREAT ATTENTION. THE MOST COMMON WAY TO REMOVE NITROGEN FROM WASTEWATERS IS THE BIOLOGICAL NITRIFICATION/DENITRIFICATION PROCESS. HOWEVER, HIGH OXYGEN REQUIREMENT OF NITRIFICATION PROCESS AND THE ORGANIC CARBON REQUIREMENT OF THE DENITRIFICATION PROCESS FOR WASTEWATERS WITH LOW CARBON: NITROGEN (C/N) RATIO RESULT IN SIGNIFICANT INCREASES IN THE OPERATIONAL COST OF TREATMENT PLANTS. ADDITIONALLY, THE EMMISIONS OF GREENHOUSE GASES (N2O, NO AND CO2) FROM DENITRIFICATION PROCESS IS OF GREAT ENVIRONMENTAL CONCERN. THE ANEOROBIC AMMONIUM OXIDATION (ANAMMOX) PROCESS, IN WHICH THE PLANCTOMYCETE-LIKE AUTOTROPHIC BACTERIA OXIDIZES AMMONIUM TO N2 GAS USING NITRITE AS ELECTRON ACCEPTOR UNDER ANAEOROBIC CONDITIONS, IS A VERY PROMISING ALTERNATIVE TO CONVENTIONAL NITRIFICATION/DENITRIFICATION PROCESS FOR NITROGEN REMOVAL FROM WASTEWATER. IN CONTRAST TO CONVENTIONAL	KOCAMEMİ	BİLGE		MARMARA UNIVERSITY	FACULTY OF ENGINEERING, ENVIRONMENTAL ENGINEERING.	ENVIRONMENTA	01-10-08	01-02-12	TUBITAK-Environment, Atmosphere, Earth and Marine Sciences Research Grant Committee	TURKEY
107Y278		ASSESSMENT OF HEAVY METALS AND SOME TRACE ELEMENTS IN MODELING OF WATER QUALITY OF ULUABAT LAKE	HEAVY METAL; ULUABAT LAKE; WATER QUALITY MODELING		KARAER	FEZA		ULUDAĞ UNIVERSITY	FACULTY OF ENGINEERING, ENVIRONMENTAL ENGINEERING.	ENVIRONMENTA	01-05-08	01-11-11	TUBITAK-Environment, Atmosphere, Earth and Marine Sciences Research Grant Committee	TURKEY
108Y129		INVESTIGATION OF FOULING MECHANISM OF MEMBRANES IN ACTIVATED SLUDGE AND JET LOOP BIOREACTORS	ACTIVATED SLUDGE; CROSS FLOW MICROFILTRATION; EXTRACELLULAR POLYMERIC MATTER (EPS); JET LOOP BIOREACTOR; MEMBRANE BIOREACTORS; MEMBRANE FOULING; SOLUBILIZED MICROBIAL PRODUCT (SMP		KARAGÜNDÜZ	AHMET		GEBZE INSTITUTE OF TECHNOLOGY	FACULTY OF ENGINEERING, ENVIRONMENTAL ENGINEERING.		01-11-08	01-11-11	TUBITAK-Environment, Atmosphere, Earth and Marine Sciences Research Grant Committee	TURKEY
108Y165		CLUSTER AND TREND ANALYSIS OF TURKISH FLOW DATA: HYDOLOGIC REGIONALIZATION BASED ON EXTEREME FLOW VARIABLES AND FLOW FORECASTING IN UNGAGED SITES BY REGIONAL METHODS)	CLUSTER ANALYSIS; DROUGHT; FLOOD; HYDROLOGIC REGIONALIZATION; REGIONAL METHODS; TREND ANALYSIS;		KAHYA	ERCAN		İSTANBUL TECHNICAL UNIVERSITY	CIVIL ENGINEERING,		01-01-09	01-01-12	TUBITAK-Environment, Atmosphere, Earth and Marine Sciences Research Grant Committee	TURKEY
108Y258		TO FORM OF WATER QUALITY SUSTAINABLE MANAGEMENT IN THE DRINKING WATER BASINS USING GEOGRAPHIC INFORMATION SYSTEM; THE MODEL OF E?IRDIR LAKE	ANALYTICAL HIERARCY PROCESS (AHP); CONTAMINATION; E?IRDIR LAKE BASIN; GEOGRAPHIC INFORMATION SYSTEM (GIS); PROTECTION OF WATER SOURCE; VULNERABILITY OF GROUNDWATER; WATER QUALITY		DAVRAZ	AYŞEN		SÜLEYMAN DEMİREL UNIVERSITY	FACULTY OF ENGINEERING, GEOLOGICAL ENGINEERING		01-03-09	01-03-12	TUBITAK-Environment, Atmosphere, Earth and Marine Sciences Research Grant Committee	TURKEY

108Y049		ANALYSIS AND MONITORING OF ENVIRONMENTAL POLLUTION OF BIOMARKERS UPON PERSISTENT ORGANIC POLLUTANTS AND ENDOCRINE DISRUPTERS IN AQUATIC ENVIRONMENTAL OF BÜYÜK MENDERES-DETERMINATION OF THEIR TOXIC EFFECTS	ENVIRONMENTAL TOXICOLOGY; POLLUTANT; FISH; PCB; ORGANOCHLOR'DE PESTICIDE; PREEN GLAND OIL; ALDEHYDE	SINCE TURKEY IS A RICH COUNTRY IN TERMS OF SEAS, RIVERS AND LAKES, AND BECAUSE OF FREQUENT CONSUMPTION OF SEAFOOD, IT HAS A CRUCIAL IMPORTANCE BOTH TO MAINTAIN THE SAFETY OF WATER RESOURCES AND TO EVALUATE THE QUALITATIVE AND QUANTITATIVE ASPECTS OF INTRODUCTION OF ENVIRONMENTAL POLLUTANTS TO AQUATIC SYSTEMS, TOXICITY ON ORGANISMS, TISSUE CONCENTRATIONS AND THEIR POTENTIAL OF REACHING TO HUMANS VIA TISSUE LEVELS. THIS REQUIREMENT WAS REALIZED BY THE SCIENTIFIC COMMUNITY IN TURKEY ESPECIALLY AT THE LAST THREE DECADES, AND A NUMBER OF SCIENTIFIC PAPERS ON GENERAL WATER RESOURCES, SEASI AND RIVER BASINS HAVE CONTINUOUSLY BEEN PUBLISHING. NEVERTHLESS, THERE ARE VERY LIMITED GENERAL POLLUTION SCREENING STUDIES AND THERE IS ONLY ONE PUBLISHED SCIENTIFIC PAPER ABOUT THE POLLUTION IN BOTH ESTUARY AND BASIN OF BÜYÜK MENDERES, ONE OF THE MOST BIGGEST AND IMPORTANT RIVER IN THE COUNTRY. THE TURKISH AUTHORITY RESPONSIBLE FOR WATER SOURCES (DS?) APPLIES ROUTINE SCREENING ANALYSES IN THIS RIVER, HOWEVER, NEITHER IN THESE ROUTINE SCREENINGS, NOR IN THE UNIQUE PUBLISHED PAPER, THE CRITICALLY IMPORTANT POLLUTANTS WERE ANALYSED. THEREFORE, WE AIMED IN THIS PROPOSAL TO INVESTIGATE BY A COMPREHENSIVE APPROACH THE DEGREE OF POLLUTION IN THE BIOTIC (AQUATIC PLANKTON AND	ORHAN	HİLMİ		EGE UNIVERSITY	TOXICOLOGY		01-07-08	01-07-12	TUBITAK-Environment, Atmosphere, Earth and Marine Sciences Research Grant Committee	TURKEY
108Y039		INVESTIGATION OF TREATABILITY BY PHYSICAL-CHEMICAL AND BIOLOGICAL METHODS BIODIESEL INDUSTRY WASTEWATERS	BIODIESEL; WASTEWATER; OIL EXTRACTION; ELECTROCOAGULATION; MICROBIAL DEGRADATION	BIODIESEL IS AN ALTERNATIVE FUEL THAT HAS PHYSICAL AND CHEMICAL PROPERTIES LIKE THE DIESEL FUEL. IT IMPROVES EMISSION CHARACTERISTICS OF THE DIESEL ENGINE. IF THE CONSUMPTION RATE OF PETROLEUM IN 1991 IS TAKEN INTO CONSIDERATION, IT WAS ESTIMATED THAT PETROLEUM WILL BE FINISHED AFTER 40 YEARS. AS A RESULT, IT IS ESTIMATED THAT CHEAP PETROLEUM WILL FINISH AFTER 10-15 YEARS.THESE CONDITIONS CAUSE TO ATTACH IMPORTANCE TO THE RENEWABLE ALTERNATIVE ENERGY SOURCES AS BIODIESEL FUEL. THERE ARE SEVERAL METHODS OF BIODIESEL FUEL PRODUCTION ALTHOUGH THE TRANSESTERIFICATION METHOD IS MOST COMMON. THE TRANSESTERIFICATION IS AN ESTERIFICATION REACTION WHICH IT WAS MADE BY ALCOHOL (METHANOL, ETHANOL, ETC.) AND ALKALI CATALYSIS. THE TRANSESTERIFICATION USING ALKALI CATALYSIS IS A USEFUL METHOD THAT ENABLES A HIGH CONVERSION OF TRIGLYCERIDES (OIL) TO FATTY ACID METHYL ESTERS BY A SIMPLE CHEMICAL REACTION IN A SHORT TIME. AFTER TRANSESTERIFICATION, GLYCEROL IS REMOVED FROM THE REACTION MIXTURE AND 20 L OF WATER IS ADDED TO RINSE THE PRODUCT. THEREFORE, ABOUT 20 L OF RAW BIODIESEL FUEL WASTEWATER IS DISCHARGED PER 100 L OF BIODIESEL FUEL PRODUCED. THE MAIN COMPONENTS OF THE WASTEWATER ARE	ŞENGİL	İSMAİL AYHAN		SAKARYA UNIVERSITY	FACULTY OF ENGINEERING, GEOLOGICAL ENGINEERING		15-07-08	15-04-12	TUBITAK-Environment, Atmosphere, Earth and Marine Sciences Research Grant Committee	TURKEY
108Y008		DIRECT ELECTRICITY PRODUCTION WITH MICROBIAL FUEL CELLS TREATING ORGANIC WASTEWATER	BIO-ELECTROCHEMISTRY; BIOCATALYST; MICROBIAL FUEL CELL; ORGANIC WASTEWATER		ÇALLI	BARIŞ		MARMARA UNIVERSITY	FACULTY OF ENGINEERING, ENVIRONMENTAL ENGINEERING.		15-06-08	15-06-11	TUBITAK-Environment, Atmosphere, Earth and Marine Sciences Research Grant Committee	TURKEY
108Y126		MONITORING THE FORMATION OF DISINFECTION BY-PRODUCTS (DBP) IN DRINKING WATER BY DIFFERANTIAL UV SPECTROSCOPY (DAS): ISTANBUL CASE	DISINFECTION; DRINKING WATER; DRINKING WATER TREATMENT		UYAK	VEDAT		İSTANBUL UNIVERSITY	FACULTY OF ENGINEERING, ENVIRONMENTAL ENGINEERING.		01-11-08	01-11-11	TUBITAK-Environment, Atmosphere, Earth and Marine Sciences Research Grant Committee	TURKEY
108Y272		TREATMENT OF ENDOCRINE DISRUPTING CHEMICALS (EDSS) IN CLASSICAL WASTEWATER TREATMENT PLANTS AND IN MEMBRANE BIOREACTOR SYSTEMS AND DEVELOPMENT OF A GENERIC WHOLESALE PARAMETER FOR THEIR ANALYSIS	ENDOCRINE DISRUPTER SUSBSTANCES; MEMBRANE BIOREACTOR; REUSE	REUSE OF TREATED WASTEWATERS IS BECOMING A SERIOUS OPTION IN COMBAT WITH THE APPROACHING GLOBAL WATER SHORTAGE AND FAMINE. MEMBRANE TECHNOLOGY HAS SINCE STOOD OUT AS A SUITABLE TECHNOLOGY IN REUSE. HOWEVER THE SO CALLED ENDOCRINE DISRUPTING SUBSTANCES (EDS), ORIGINATING FROM HOUSEHOLD MEDICINES AND FROM PESTICIDES IN AGRICULTURE AND INDUSTRIAL PRODUCTS ARE CONSIDERED AS THE THIRD GENERATION POLLUTANTS. THE EDSS ARE IMPORTANT IN THE ENVIRONMENT OWING TO THEIR ABILITY TO INTERFERE WITH THE HORMONAL STATUS OF LIVING ORGANISMS AND THEREBY CAUSING GENDER REVERSAL AND CANCER EVEN WHEN PRESENT AT NANOGRAM AND MICROGRAM LEVELS IN THE WATERS. CURRENT VIEW IS TO REMOVE THESE FROM WATERS AS MUCH AS TECHNOLOGICALLY POSSIBLE AT EVERY STEP OF TREATMENT. IN THE PROPOSED STUDY AND IN THE FIRST PHASE AN INVENTORY OF TREATMENT EFFICACY OF SELECTED TREATMENT PLANTS IN TURKEY IS AIMED IN ORDER TO ESTABLISH THE CURRENT STATUS IN THE COUNTRY AND TO ASSESS REMOVAL PERFORMANCE OF DIFFERENT TREATMENT PROCESSES. IN THE SECOND PHASE EDS TREATMENT IN A FULL SCALE AND PILOT SCALE MBR UNITS LOCATED IN METU CAMPUS-ANKARA WILL BE STUDIED. ENHANCEMENT OF TREATMENT IN MBRS WILL BE SOUGHT AND THE PROCESS MAY BE MODIFIED BY INCLUSION OF	GÖKÇAY	CELAL FERDİ		MIDDLE EAST TECHNICAL UNIVERSITY	FACULTY OF ENGINEERING, ENVIRONMENTAL ENGINEERING.		01-03-09	01-03-12	TUBITAK-Environment, Atmosphere, Earth and Marine Sciences Research Grant Committee	TURKEY

108Y185		RESEARCH OF ORGANIC POLLUTANTS SOURCED FROM DIFFERENT ORIGINS HAZARDOUS TO HUMAN HEALTH FOUND IN MUSSELS (MYTILUS GALLOPROVINCIALIS) IN IZMIR BAY COASTLINE	MUSSEL; ORGANIC POLLUTER; IZMIR BAY	MUSSELS ARE THE INVERTEBRATES WITH A SOFT BODY AND AN ELONGATED HARD SHELL THAT FEED BY SOLID SUBSTANCES PENDENT IN WATER, PLANKTONS AND VARIOUS FOOD PARTICLES BY FILTERING MARINE WATER. MARINE CRUSTACEANS TAKE ORGANIC POLLUTANTS WHILE FEEDING. DETERMINATION OF RELATION BETWEEN POLLUTION LEVELS OF TWO PERMANENT ORGANIC POLLUTIVES AND ONE BIOLOGICAL ORGANIC POLLUTIVE AND MANIFESTING VARIABILITY ACCORDING TO SEASONS ARE VERY IMPORTANT IN MUSSELS IN ?ZMIR BAY. THIS STUDY FINDINGS WILL PRESENT REMARKABLE DATA FOR FURTHER STUDIES RELATED TO PUBLIC HEALTH. ONE OF THESE DIFFERENT ORGANIC SUBSTANCES ARE THE OOCYTES OF CRYPTOSPORIDIUM PARASITE THAT CONTAINS A BIOLOGICAL SOURCE (FAECAL ORGANIC SUBSTANCE). RIVER WATER AND SEACOASTS COULD BE CONTAMINATED BY THE FECES OF FARM ANIMALS AND HUMANS THAT INFECTED BY THIS PARASITE. THIS PARASITE COULD TRIGGER TO LONG TERMED AND SEVERE CHOLERA LIKED DIARRHEA AMONG IMMUNSUPPRESIF INDIVIDUALS. OTHER ORGANIC SUBSTANCE IS PESTICIDE RESIDUES IN MARINE WATER COMING FROM AGRICULTURAL LANDS BY VARIOUS TRANSPORT MECHANISMS. HYDROPHOBIC ORGANOCHLORINATED PESTICIDES ACCUMULATE IN AQUATIC ORGANISMS WHICH SHOW HIGH AFFINITY TO LIPID	AKSOY	ÜMİT		DOKUZ EYLÜL UNIVERSITY	MEDICAL SCIENCES		01-12-08	01-06-12	TUBITAK-Environment, Atmosphere, Earth and Marine Sciences Research Grant Committee	TURKEY
104Y186		PESTISIT AND DOMESTIC POLLUTION EFFECTS ON MACROINVERTEBRATE AND FISH FAUNAS IN SARICAY RIVER AND ATIKHISAR RESERVOIR	PESTICIDE POLLUTION; SEWAGE POLLUTION; BIOCHEMICAL BLOOD PARAMETERS; BENTIC MACROINVERTEBRATE FAUNA		AKBULUT	MEHMET		ÇANAKKALE ONSEKİZ MART UNIVERSITY	FACULTY OF AQUACULTURE		15-04-05	15-04-08	TUBITAK-Environment, Atmosphere, Earth and Marine Sciences Research Grant Committee	TURKEY
104Y393		INVESTIGATION ON DECOLORIZATION POTENTIAL OF FUNGALPOPULATION WHICH IS ISOLATED FROMDYE CONTAMINATED SOILS	DECOLORIZATION, FUNGI, TEXTILE, DYESTUFF		BIYIK	HACI HALİL		ADNAN MENDERES UNIVERSITY	BIOLOGY		01-07-05	01-07-08	TUBITAK-Environment, Atmosphere, Earth and Marine Sciences Research Grant Committee	TURKEY
104Y267		THE DEVELOPMENT OF AN ELECTROCHEMICAL REACTOR FOR INDUSTRIAL WASTEWATER PURIFICATION	INDUSTRIAL WASTEWATER TREATMENT, ELECTROOXIDATION, ELECTROFLOTATION, ELECTROCOAGULATION, OPTIMUM DESIGN	OVER THE RECENT YEARS,ELECTROCHEMICAL PROCESSES HAVE BEEN SUCCESSFULLY APPLIED FOR THE TREATMENT OF INDUSTRIAL WASTEWATERS MAINLY DUE TO ITS HIGH PERFORMANCE IN REMOVAL OF POLLUTANTS, LOW CAPITAL AND OPERATING COSTS, AND OPERATIONAL FACILITY WITH COMPACT EQUIPMENTS. IT IS PARTICULARLY EFFECTIVE IN TREATING WASTEWATERS WITH HIGH COD LOADS, CONTAINING COLLOIDAL AND LIGHT SUSPENDED PARTICLES. HENCE, IT IS EXPECTED THAT THE ELECTROCHEMICAL PROCESS WOULD BE AN IDEAL CHOICE FOR TREATING WASTEWATERS FROM TEXTILE, TANNERY, MEDICAL, FOOD INDUSTRIES, AS EXAMPLES.IN OUR WORK, IT IS AIMED TO DEVELOP AND DESIGN OF AN ELECTROCHEMICAL REACTOR FOR THE ABOVE GOAL. IN THESE REACTORS, QUITE COMPLEX PHENOMENA OCCUR SERIALLY OR PARALLELY. TO ORIENT THESE PROCESSES TO ACHIEVE A HIGH PURIFICATION PERFORMANCE, ELECTROCHEMICAL REACTOR MUST BE OPTIMALLY DESIGNED USING BOTH STRUCTURAL AND PARAMETRIC VARIABLES. AS STRUCTURAL VARIABLES; ANOD/CATHODE TYPE (SACRIFICIAL OR INERT), ELECTRODE NUMBER AND INSTALLATION PLAN IN THE REACTOR, CONNECTION MODE (SERIAL - PARALEL, POLAR-BIPOLAR), FLOW DYNAMICS INSIDE THE REACTOR, EXITS OF WATER EFFLUENT AND FLOCS FROM REACTOR, REACTOR GEOMETRY AND SIZINGS, MAY BE	KOBYA	MEHMET		GEBZE INSTITUTE OF TECHNOLOGY			01-07-05	01-07-08	TUBITAK-Environment, Atmosphere, Earth and Marine Sciences Research Grant Committee	TURKEY
104Y224		INVESTIGATION OF THE EFFECTS OF DIFFERENT FACTORS AND THEIR INTERACTIONS ON PREFERENTIAL FLOW AND GROUNDWATER CONTAMINATION	GROUNDWATER CONTAMINATION; PREFERNTIAL FLOW		MERDUN	HASAN		KAHRAMANMARAŞ SÜTÇÜ İMAM UNIVERSITY	FACULTY OF AGRICULTURE		01-07-05	01-07-08	TUBITAK-Environment, Atmosphere, Earth and Marine Sciences Research Grant Committee	TURKEY

105Y135		DETERMINATION OF ORGANOCHLORINE PESTICIDES IN FRESHWATER FISH AND WATER OF EBER LAKE, KARAMIK LAKE, AK?EHIR LAKE AND DRINKING WATER IN AFYONKARAHISAR PROVINCE AND ENVIRONS	EBER LAKE, KARAMIK LAKE, AK?EHIR LAKE, DIRINKING WATER, ORGANOCHLORINE PESTICIDE AND FRESHWATER FISH.	THE HIGH INCREASING OF WORLD POPULATION AND OF FOOD DEMAND CAUSE TOGETHER ENVIRONMENTAL PROBLEMS. IT WAS IMPORTANT TO GET HIGH AMOUNT OF PRODUCTS IN UNIQUE AREA AND INCREASE AGRICULTURE PRODUCTION TO SUPPLY FOOD DEMANDS OF INCREASING POPULATIONS. FORT THIS PURPOSE, IT HAS BEEN USED PESTICIDES TO STRUGGLE WITH HARMFUL INSECTS, PATHOGENS AND UNWANTED HERBS. PESTICIDES HAVE BEEN USED TO STRUGGLE WITH THE VECTORS THREATING HUMAN HEALTH. ALLTOUGH PESTICIDES GIVE RISE TO INCREASE PRODUCTS, THEY INCREASE UNWANTED EFFECTS IN HUMAN HEALTH. PESTICIDES SHOW DIFFERENT TOXIC EFFECTS IN LIVING ORGANISMS. UNLESS THEY HAVE TOXICITY DIRECTLY, ALL LIVING ORGANISMS IN AN ECOSYSTEM ARE EFFECTED INDIRECTLY. IT WAS OBSERVED THAT LAKE WATER WAS HIGHLY POLLUTED AND EUTROFIED. ALSO HOUSE AND ENVIRONMENTAL POLLUTANTS ACCUMULATED AND INCREASED WATER POLLUTION. THE WASTE OF SEWER SYSTEM AND INDUSTRY (ALCOLOID, SUGAR FACTORY ETC.) ACCUMULATE TO EBER LAKE. THIS PROJECT IS GOING TO BE DONE FOR DETERMINATION OF ORGANOCHLORINE PESTICIDES IN FRESHWATER FISH AND WATER OF EBER LAKE, KARAMIK LAKE, AK?EHIR LAKE AND DRINKING WATER IN AFYONKARAHISAR PROVINCE AND ENVIRONS. FORT THIS PURPOSE WATER AND FISH	BULUT	SAİT		AFYON KOCATEPE UNIVERSITY	BIOLOGY		15-10-05	15-10-08	TUBITAK-Environment, Atmosphere, Earth and Marine Sciences Research Grant Committee	TURKEY
104Y183		LIMNOLOGICAL INVESTIGATIONS ON LAKES OF EASTERN BLACK SEA RANGE	LIMNOLOGY, BIODIVERSITY, MOUNTAIN LAKES.		USTAOĞLU	MUSTAFA RUŞEN		EGE UNIVERSITY	FACULTY OF AQUACULTURE		15-04-05	15-04-09	TUBITAK-Environment, Atmosphere, Earth and Marine Sciences Research Grant Committee	TURKEY
105Y332		THE CONSERVATION OF TURKISH SHALLOW LAKES BY DETERMINING THE INTERACTIONS BETWEEN THEIR ECOLOGICAL STRUCTURE, CLIMATE AND ANTHROPOGENIC USE WITH HOLISTIC AND SENSITIVE METHODS AND THE DEVELOPMENT OF STRATEGIES FOR THEIR RESTORATION	FOOD WEB, STABLE ISOTOPES, EUTROPHICATION, PALEOLIMNOLOGY, GLOBAL, CLIMATIC CHANGE, MODELLING, MESOCOSM EXPERIMENTS		OĞUZKURT	DİDEM		İNÖNÜ UNIVERSITY	BIOLOGY		15-06-06	15-06-09	TUBITAK-Environment, Atmosphere, Earth and Marine Sciences Research Grant Committee	TURKEY
106Y078		TREATMENT OF INDUSTRIAL DYEING WASTEWATERS WITH CATALYTIC OZONATION	TEXTILE WASTEWATER TREATMENT; OZONATION; HETEROGENEOUS PHASE CATALYTIC OZONATION; TEXTILE DYE; PERFLUOROOCTYL ALUMINA (PFOA) VE ALUMINA CATALYST; ADVANCED OXIDATION; PROCESSES (AOPS)		ÖZBELGE	AYŞE TÜLAY		MIDDLE EAST TECHNICAL UNIVERSITY	FACULTY OF ENGINEERING, CHEMICAL ENGINEERING		01-08-06	01-08-09	TUBITAK-Environment, Atmosphere, Earth and Marine Sciences Research Grant Committee	TURKEY
106Y241		DETERMINATION OF INTERACTION BETWEEN ANAEROBIC TREATMENT OF ORGANIC SOLVENT CONTAINING INDUSTRIAL WASTEWATER WITH ITS SYSTEM DYNAMICS USING MOLECULAR TOOLS	ORGANIC SOLVENTS, ANAEROBIC BIODEGRADATION, METHANOGENIC/NONMETHANOGENIC ACTIVITY, FISH, 16S RDNA BASED MOLECULAR, ACETYL COA (ACCOA) INHIBITION.	MANY KINDS OF SOLVENTS ARE DISCHARGED FROM INDUSTRIES SUCH AS REFINERIES, PAINT AND PHARMACEUTICAL MANUFACTURERS ETC. HUNDREDS OF ORGANIC AND INORGANIC RAW MATERIALS AND MANY ORGANIC SOLVENTS USED TO DISSOLVE THE COMPOUNDS ARE REQUIRED IN THESE PROCESSES. THE MOST COMMONLY USED SOLVENTS ARE METHANOL, ETHANOL, ACETONE, AND ISOPROPANOL. MOREOVER, METHYLENE CHLORIDE, TOLUENE, CHLOROFORM, CHLOROBENZENE, CHLOROMETHANE, CYANIDE, PHENOL, AND BENZENE ARE ALSO USED (EPA, 1997). THESE KIND OF WASTES CAUSE SERIOUS ENVIRONMENTAL POLLUTION. IN RECENT YEARS, DISCHARGES OF THE COMPOUNDS HAVE BEEN SUBJECT TO STRINGENT ENVIRONMENTAL REGULATIONS BECAUSE OF THEIR UNDESIRABLE EFFECT ON LIVING ORGANISMS IN AQUATIC ENVIRONMENTS AND HUMAN HEALTH. SINCE THESE COMPOUNDS ARE WIDELY USED IN THE PROCESSES, THEY MAY BE FOUND IN SIGNIFICANT AMOUNTS IN WASTE STREAMS. ALL THESE FACTORS LEAD TO AN INTENSE INTEREST IN THE TREATMENT OF THE SOLVENT CONTAINING WASTEWATERS TO LIMIT THEIR DISCHARGES INTO THE ENVIRONMENT. THEREFORE, IN RECENT YEARS, BIOLOGICAL TREATMENT TECHNIQUES, AEROBIC AND ANAEROBIC, WHICH MAY PROVIDE PARTIAL OR FULL DEGRADATION OF INDUSTRIAL	İNCE	BAHAR		BOĞAZİÇİ UNIVERSITY	INSTITUTE OF ENVIRONMENTAL SCIENCES		01-02-07	01-02-10	TUBITAK-Environment, Atmosphere, Earth and Marine Sciences Research Grant Committee	TURKEY

106Y171		TREATMENT OF DRINKING WATERS BY SUBMERGED MEMBRANES: NEW METHODS TO DECREASE MEMBRANE FOULING	NANOTECHNOLOGY, SUBMERGED MEMBRANE SYSTEM, DRINKINGWATER TREATMENT, ULTRAFILTRATION, MEMBRANE FOULING, ULTRASONIC WAVES, ZEOLITES, UV.		KOYUNCU	İSMAİL		İSTANBUL TECHNICAL UNIVERSITY	ENVIRONMENTAL ENGINEERING		01-02-07	01-02-10	TUBITAK-Environment, Atmosphere, Earth and Marine Sciences Research Grant Committee	TURKEY
107Y043		REMOVAL OF DYE POLLUTION FROM TEXTILE WASTE WATERS USING PEANUT SHELL, FOAM,CHARCOAL, FUNGUS AND YEAST BY ADSORPTION METHOD, THE INVESTIGATION OF ADSORPTION KINETIC AND THE BIODEGRADATION PROPERTIES OF THE ADSORBENTS	PEANUT SHELL, POLYURETHANE TYPE FOAM, FUNGUS, YEAST, ASPERGILLUS FLAVUS, SACCHAROMYCES CEREVISIAE, TEXTILE DYES, ADSORPTION, ADSORPTION ISOTHERM, ADSORPTION KINETICS, ADSORPTION MECHANISM, BIODEGRADSYON, REACTOR DESING.	WORKS ON REMOVAL OF ORGANIC, INORGANIC AND DYE POLLUTION FROM INDUSTRIAL WASTE WATERS BY ADSORPTION TECHNIQUE HAVE HIGHLY BECAME WIDESPREAD IN OUR COUNTRY AND THE WORLD. RECENTLY, FOR AIM THE FACT THAT WORKS DONE ON THE REMOVAL OF THIS KIND OF POLLUTION ARE ECONOMICALLY PERFORMED, WORKS DONE BY PREPARING ALTERNATIVE MATERIALS AND USING LIGNOCELLULOSIC WASTES CONTAINING NATURAL POLYMERS SUCH AS CELLULOSE AND LIGNIN LINE IN LITERATURE. IN THIS STUDY, FIRSTLY THE PRODUCTION OF NATURAL ORGANIC BASEDPOLYURETHANE-TYPE FOAM WITH PEANUT SHELL, THE CHARCOAL OF PEANUT SHELL AND BIOLOGICAL FUNGUS (ASPERGILLUS FLAVUS) AND YEAST (SACCHAROMYCES CEREVISIAE) WILL BE PERFORMED ,AND THEIR STRUCTURES WILL BE CHARACTERIZED BY USING ELEMENTAL ANALYSIS. THAN PEANUT SHELL, AND PEANUT SHELL FOAM AND CHARCOAL, ASPERGILLUS FLAVUS FUNGUS AND SACCHAROMYCES CEREVISIAE YEAST WHICH WILL BE PRODUCED WILL BE UTILIZED AS AN BIOADSORBED FOR TREATIBILITY OF TEXTILE DYE WASTE WATERS. MOREOVER, REACTOR DESING BELONG TO PROCESS, BIYOADSORPTION ISOTHERM, KINETICS AND MECHANISM WILL BE STUDIED IN DETAIL. FOR THIS AIM, ALL EXPERIMENTS WILL BE CARRIED OUT BY USING BOTH COLON SYSTEM AND BATCH ADSORPTION METHOD. THE ADSORPTION CAPACITIES OF FOAM,	ACEMİOĞLU	BİLAL		KİLİS YEDİ ARALIK UNIVERSITY			01-07-07	01-07-10	TUBITAK-Environment, Atmosphere, Earth and Marine Sciences Research Grant Committee	TURKEY
107Y178		PRODUCTION AND APPLICATION OF A NOVEL SORBENT FOR THE REMOVAL OF OIL SPILLS FROM WATERS AND WASTE WATERS	OIL SPILL IN SEA WATERS, OILS, SORBENTS, POLYMERS, BUTYL RUBBER	THE OIL SPILL PROBLEM IN SEA WATER RESULTS IN A NEGATIVE IMPACT IN THE QUALITY OF SURFACE WATERS AS WELL AS IN THE AQUATIC ECOSYSTEM. ONE OF THE POLLUTANTS IN THE COMPOSITION OF CRUDE OIL, NAMELY POLYCYCLIC AROMATIC HYDROCARBONS ARE KNOWN TO BE CARCINOGENS AND, ARE IN THE EPA LIST OF BASIC CONTAMINANTS. THE NUMBER OF OILTANKERS PASSING THROUGH THE TURKISH STRAITS HAS BEEN INCREASING DRAMATICALLY IN RECENT YEARS. AS A CONSEQUENCE, THE INTENSIVE TRAFFIC IN THE TURKISH STRAITS LEADS TO AN INCREASED RISK OF TANKER ACCIDENTS AND THE OIL SPILL PROBLEM. ONLY IN THE YEAR 2003, 130 MILLIONS OF OIL HAS BEEN TRANSPORTED BY OIL-TANKERS THROUGH THE ISTANBUL STRAIT. AMONG THE TECHNIQUES USED TODAY, THE APPLICATION OF SORBENTS IS THE MOST EFFECTIVE METHOD TO REMOVE THE OIL SPILLS FROM SURFACE WATER. THE AIM OF THIS PROJECT IS THE PRODUCTION OF SUPERABSORBENT, MACROPOROUS AND REUSABLE NOVEL SORBENT MATERIALS BASED ON BUTYL RUBBER AND THEIR APPLICATION FOR THE REMOVAL OF CRUDE OIL, THE DERIVATIVES OF CRUDE OIL AS WELL AS MINERAL AND VEGETABLE OILS FROM WATERS AND WASTE WATERS AROUND THE MEGACITY ISTANBUL. IN THE PRELIMINARY EXPERIMENTS, WE DEVELOPED A	OKAY	OĞUZ		İSTANBUL TECHNICAL UNIVERSITY	CHEMISTRY		01-11-07	01-11-10	TUBITAK-Environment, Atmosphere, Earth and Marine Sciences Research Grant Committee	TURKEY
107Y170		CHARACTERIZATION OF THE AQUIFER UTILISED FOR WATER SUPPLY FOR KAYSERI CITY, POLLUTION RISKS AND DELINEATION OF BASIN-WIDE PROTECTION AREAS	AQUIFER, GROUNDWATER POLLUITON, PROTECTION ZONE, ISOTOPE	CURRENTLY, THE DEMAND FOR DOMESTIC WATER OF ABOUT %70 OF THE POPULATION IN TURKEY IS SUPPLIED BY GROUNDWATER WHILE BIG CITIES LIKE ISTANBUL, ANKARA AND ?ZMIR AND SOME OTHER TOWNS MEET THEIR NEED BY TREATED SURFACE WATERS. THE COST OF TREATMENT IS HIGH. ON THE OTHER HAND, DURING THE PRE-CHLORINATING PROCESS, A RISK OF PRODUCTION OF CARCINOGEN CHLORINATED ORGANIC COMPOUNDS SHOULD NOT BE IGNORED FOR WATERS CONTAINING "ORGANIC MATERIAL". THEREFORE, IT IS OF GREAT IMPORTANCE TO USE THE GROUNDWATER AS A MORE RELIABLE AND CHEAPER SOURCE IN MANY SETTLEMENTS. HOWEVER, DUE TO THE INCREASE OF POPULATION AND IMMENSE INDUSTRIAL ACTIVITIES, THE GROUNDWATER RESOURCES ARE ALSO UNDER THE RISK OF POLLUTION BY INDUSTRIAL WASTES, LACK OF INFRASTRUCTURE, UNCONTROLLED AND IMMENSE HOUSING AND PARTICULARLY BY THE ABONDONED WASTE DISPOSAL SITES THAT HAVE BEEN LOCATED WITHOUT A PROPER SITE INVESTIGATION. MANY CITIES IN TURKEY, INCLUDING KAYSERI CITY WILL FACE THIS SERIOUS PROBLEM IN THE NEAR FUTURE IF EFFECTIVE MEASURES AGAINST POLLUTION ARE NOT TAKEN. THE CLEAN-UP AND RESTORATION OF CONTAMINATED AQUIFERS IS DIFFICULT AND IN MOST CASES IMPOSSIBLE. ON THE OTHER HAND, DUE TO THE LOW FLOW VELOCITY, IT IS DIFFICULT TO DETERMINE THAT THE	DEĞİRMENCİ	MUSTAFA		CUMHURİYET UNIVERSITY	FACULTY OF ENGINEERING, ENVIRONMENTAL ENGINEERING.		15-02-08	15-02-11	TUBITAK-Environment, Atmosphere, Earth and Marine Sciences Research Grant Committee	TURKEY

108Y313		A NEW APPROACH IN INDUSTRIAL WASTEWATER TREATMENT: AEROBIC GRANULAR BIOMASS TECHNOLOGY	BIOLOGICAL TREATMENT; GRANULAR BIOMASS; GRANULATION; INDUSTRIAL WASTEWATER TREATMENT; SELECTION PRESSURE; SEQAUENCING BATCH REACTOR		DÜLEKGÜRGEN	EBRU		İSTANBUL TECHNICAL UNIVERSITY,	ENVIRONMENTAL ENGINEERING		01-03-09	01-09-12	TUBITAK-Environment, Atmosphere, Earth and Marine Sciences Research Grant Committee	TURKEY
108Y319		INVESTIGATION OF REMOVAL OF BIOLOGICAL PHOSPHOROUS IN ANOXIC CONDITIONS	DENITRIFICATION; DENITRIFYING PHOSPHORUS ACCUMULATING ORGANISMS; ENHANCED BIOLOGICAL PHOSPHORUS REMOVAL; NITRIFICATION		SEMERCİ	NESLİHAN		MARMARA UNIVERSITY	FACULTY OF ENGINEERING, ENVIRONMENTAL ENGINEERING.		01-03-09	01-03-12	TUBITAK-Environment, Atmosphere, Earth and Marine Sciences Research Grant Committee	TURKEY
108Y311		COMPARATIVE EVALUATION OF N-NITROSODIMETHYLAMINE (NDMA) AND TRIHALOMETHANE (THM) FORMATION IN BUYUKCEKMECE WATERSHED	BUYUKCEKMECE WATERSHED; CHLORAMINES; DISINFECTION BY PRODUCT; DISINFECTION WITH CHLORINE; DRINKING WATER TREATMENT;N-NITROSODIMETHYLAMINE (NDMA); NATURAL ORGANIC MATTER; ORGANIC NITROGEN; TRIHALOMETHANE (THM)	DISINFECTION BYPRODUCTS (DBPS) ARE CHEMICALS THAT ARE FORMED DURING DISINFECTION OF DRINKING WATER TO REMOVE PATHOGENS AND THIS GROUP OF COMPOUNDS INCLUDES BOTH HALOGENATED AND NONHALOGENATED COMPOUNDS DEPENDING ON THE DISINFECTANT USED. TRIHALOMETHANES (THM) ARE THE BEST KNOWN HALOGENATED DISINFECTION BYPRODUCTS ON WHICH THE MOST RESEARCH HAS BEEN CONDUCTED. THM ARE CARCINOGENIC AND THEY MAY REACH HIGH CONCENTRATIONS DURING CHLORINATION OF DRINKING WATER WHICH CONTAINS HIGH NATURAL ORGANIC MATTER (NOM) CONCENTRATION. THERE ARE TWO OPTIONS TO DECREASE THE CONCENTRATION OF THM. THE FIRST OPTION IS TO REMOVE THE THM PRECURSORS FROM THE DRINKING WATER AND THE SECOND OPTION IS EMPLOYING A DIFFERENT DISINFECTANT. USE OF CHLORAMINATION INSTEAD OF CHLORINATION PROVIDES TWO BENEFITS. THE FIRST BENEFIT IS THE DECREASE IN THM CONCENTRATIONS. THE SECOND BENEFIT IS THE PROTECTION OF PUBLIC HEALTH IN CASE OF A LEAKAGE IN THE DISTRIBUTION SYSTEM DUE TO THE PESENCE OF RESIDUAL CHLORINE IN THE SYSTEM. ALTHOUGH CHLORAMINATION OF WATER DECREASES THE CONCENTRATION OF THM, IT MAY LEAD TO THE FORMATION OF ANOTHER DBP, NAMELY, N-NITROSODIMETHYLAMINE (NDMA). NDMA AS A DISINFECTION BYPRODUCT HAS BEEN DISCOVERED IN RECENT YEARS AND IT IS	MANTAŞ	ELİF PEHLİVANOĞLU		İSTANBUL TECHNICAL UNIVERSITY	ENVIRONMENTAL ENGINEERING		01-03-09	01-03-12	TUBITAK-Environment, Atmosphere, Earth and Marine Sciences Research Grant Committee	TURKEY
104I134		COMPARISON OF THE DIRECT FILTRATION VS. PRE-OZONATION AND COAGULATION ON THE WATER QUALITY			YÜKSEL	EBUBEKİR		GEBZE INSTITUTE OF TECHNOLOGY	ENVIRONMENTAL ENGINEERING		15-04-05	15-04-08	TUBITAK-Environment, Atmosphere, Earth and Marine Sciences Research Grant Committee	TURKEY
104Y063		DNAPL REMEDIATION IN KARST AQUIFERS: EFFECTIVENESS OF IN SITU CHEMICAL OXIDATION USING POTASSIUM PERMANGANATE			YOLCUBAL	IRFAN		KOCAELİ UNIVERSITY	FACULTY OF ENGINEERING GEOLOGICAL ENGINEERING		15-04-05	15-10-09	TUBITAK-Environment, Atmosphere, Earth and Marine Sciences Research Grant Committee	TURKEY
106Y224		TREATABILITY OF CYANIDE AND METAL-CYANIDE COMPLEXES(ME-CN) IN PHOTOLYTIC OXIDATION-ALGAL REACTOR COMBINATION AND SYSTEM KINETICS	CYANIDE, METAL-CYANIDE COMPLEX, OXIDATION, UV, PHOTOLYTIC OXIDATION, PHOTOLYTIC; PEROXIDATION, ALGAE, BIO-OXIDATION		YEL	ESRA		SELÇUK UNIVERSITY	FACULTY OF ENGINEERING, ENVIRONMENTAL ENGINEERING		01-02-07	01-02-10	TUBITAK-Environment, Atmosphere, Earth and Marine Sciences Research Grant Committee	TURKEY
105Y262		REMOVAL OF CALCIUM BIOCATALYTICALLY IN INDUSTRIAL WASTEWATERS	BIOCALCIFICATION; CARBONATE; INDUSTRIAL WASTEWATER; PAPERMAKING; CO2 STRIPPER; ANAEROBIC; BIOTECHONOLOGY		IŞIK	MUSTAFA		AKSARAY UNIVERSITY	FACULTY OF ENGINEERING , ENVIRONMENTAL ENGINEERING		15-05-06	15-05-10	TUBITAK-Environment, Atmosphere, Earth and Marine Sciences Research Grant Committee	TURKEY
104I071		INTEGRATED MODELLING OF NUTRIENT LOADS AND EUTROPHICATION IN THE CATCHMENT AREA OF THE ?ZMIT BAY, THE TAHTALI AND THE PORSUK RIVER BASINS			KARPUZCU	MEHMET		GEBZE INSTITUTE OF TECHNOLOGY	ENVIRONMENTAL ENGINEERING		01-01-05	01-01-08	TUBITAK-Environment, Atmosphere, Earth and Marine Sciences Research Grant Committee	TURKEY

103Y112		MODELING GROUND WATER FLOW AND SEAWATER INTRUSION: CAP BON AQUIFER IN THE NORTH OF TUNISIA			YURTAL	RECEP		ÇUKUROVA UNIVERSITY	CIVIL ENGINEERING		15-04-04	15-04-08	TUBITAK-Environment, Atmosphere, Earth and Marine Sciences Research Grant Committee	TURKEY
104I136		EVALUATION OF SUITABLE TOXICITY TESTS FOR INDUSTRIAL WASTEWATERS			AYDIN	MEHMET EMİN		SELÇUK UNIVERSITY	ENVIRONMENTAL ENGINEERING		01-08-05	01-08-08	TUBITAK-Environment, Atmosphere, Earth and Marine Sciences Research Grant Committee	TURKEY
104I130		REHABILITATION OF SOIL AND GROUNDWATER BY USING TWO NEW METHODS	GROUNDWATER, ORGANIC POLLUTANTS, POLLUTANT REMEDIATION, ADVANCED OXIDATION, IN-SITU REMEDIATION, MATHEMATICAL MODELING, PARAMETER ESTIMATION, HETEROGENEITY		COPTY	NADİM		BOĞAZİÇİ UNIVERSITY	INSTITUTE FOR ENVIRONMENTAL SCIENCES		15-04-05	15-10-08	TUBITAK-Environment, Atmosphere, Earth and Marine Sciences Research Grant Committee	TURKEY
105Y155		MODELING OF GROUNDWATER FLOW AND QUALITY IN KARSTIC SYSTEMS USING SOFT COMPUTING METHODS			BAYARI	CELAL SERDAR		HACETTEPE UNIVERSITY	FACULTY OF ENGINEERING, HYDROGEOLOGY ENGINEERING		01-01-06	01-01-09	TUBITAK-Environment, Atmosphere, Earth and Marine Sciences Research Grant Committee	TURKEY
105Y379		BEHAVIOUR OF SELECTED ORGANIC AND INORGANIC XENOBIOTICS IN BIOLOGICAL SYSTEMS AND FORMATION OF STRUCTURE - ACTIVITY RELATIONSHIP (SAR) MODELS	XENOBIOTICS; ORGANIC POLLUTANTS; CHLORINATED ORGANICS; HEAVY METALS; ACTIVATED SLUDGE; QSAR		ÇEÇEN	FERHAN		BOĞAZİÇİ UNIVERSITY	INSTITUTE FOR ENVIRONMENTAL SCIENCES		01-06-06	01-06-09	TUBITAK-Environment, Atmosphere, Earth and Marine Sciences Research Grant Committee	TURKEY
106Y302		DETERMINATION OF PRIORITY POLLUTANTS AND THEIR EFFECTS IN THE ISTANBUL STRAIT ECOSYSTEM	PAHS, POPS, MUSSEL, SEDIMENT, ISTANBUL STRAIT		OKAY	OYA		İSTANBUL TECHNICAL UNIVERSITY	OCEAN TECHNOLOGY ENGINEERING		01-04-07	01-04-10	TUBITAK-Environment, Atmosphere, Earth and Marine Sciences Research Grant Committee	TURKEY
106Y299		REMOVAL OF ARSENIC FROM DRINKING WATER BY USING MEMBRANE PROCESSES	REMOVAL OF ARSENIC; MEMBRANE PROCESSES		ERSÖZ	MUSTAFA		SELÇUK UNIVERSITY	CHEMISTRY		01-05-07	01-05-10	TUBITAK-Environment, Atmosphere, Earth and Marine Sciences Research Grant Committee	TURKEY
106Y201		RADIOLOGICAL AND CHEMICAL MONITORING OF THE RIVERS COMMON FOR TURKEY AND BULGARIA			AYTAŞ	ŞULE		EGE UNIVERSITY	INSTITUTE FOR NUCLEAR SCIENCES		01-06-07	01-06-10	TUBITAK-Environment, Atmosphere, Earth and Marine Sciences Research Grant Committee	TURKEY
108Y242		AGRICULTURAL REUSE OF WATER AND NUTRIENTS FROM WASTEWATER TREATMENT IN TURKEY			DEMİRER	GÖKSEL NİYAZİ		MIDDLE EAST TECHNICAL UNIVERSITY	FACULTY OF ENGINEERING , ENVIRONMENTAL ENGINEERING		01-02-09	01-02-12	TUBITAK-Environment, Atmosphere, Earth and Marine Sciences Research Grant Committee	TURKEY
108Y243		INDUSTRIAL WASTEWATER REUSE IN TEXTILE INDUSTRY BY APPLICATION OF APPROPRIATE MEMBRANE TREATMENT TECHNOLOGY AND INVESTIGATING PRE-TREATMENT METHODS, FOULING PHENOMENON, AND CLEANING OF FOULED MEMBRANES			KOYUNCU	İSMAİL		İSTANBUL TECHNICAL UNIVERSITY	ENVIRONMENTAL ENGINEERING		01-05-09	01-05-12	TUBITAK-Environment, Atmosphere, Earth and Marine Sciences Research Grant Committee	TURKEY

108Y228		MODELLING PHOSPHORUS AND NITROGEN CYCLES AT OXIC-ANOXIC INTERFACES IN THE WATER COLUMN			SALİHOĞLU	BETTİNA FACH		MIDDLE EAST TECHNICAL UNIVERSITY,	INSTITUTE FOR MARINE SCIENCES		15-07-09	15-07-12	TUBITAK-Environment, Atmosphere, Earth and Marine Sciences Research Grant Committee	TURKEY
107T680		THE POTENTIAL RELEVANCE OF AMONIA-OXIDIZING ARCHAEA IN ENGINEERED ENVIRONMENTS	AMONIA OXIDIZING ARCHAEA (AOA), WASTEWATER TREATMENT, MICROBIAL POPULATION DYNAMICS, 16S RRNA BASED PHYLOGENETIC ANALYSIS, NITRIFICATION-DENITRIFICATION	OVER THE LAST DECADE, IN THE LIGHT OF THE LATEST ADVANCES AND FINDINGS, SCIENTISTS' VIEW ON ARCHAEA, ONE OF THE THREE DOMAINS OF LIFE, HAS CHANGED SIGNIFICANTLY. NOW IT IS WELL ACCEPTED THAT ARCHAEA DO NOT ONLY INHABIT EXTREME ENVIRONMENTS, BUT CAN ALSO DWELL IN A WIDE VARIETY OF ECOSYSTEMS AND HAVE AN EXTENSIVE DIVERSITY. TODAY ARCHAEA ARE DETECTED EVERYWHERE; BESIDES THE SPECIES THAT ARE IDENTIFIED (OR CULTURED) FROM METHANOGENIC, THERMOPHILIC OR HALOPHILIC GROUPS, THEY ARE ALSO FOUND IN OUR GARDENS, FORESTS, OCEANS, LAKES, AEROBIC AND ANAEROBIC WASTEWATER TREATMENT SYSTEMS. THESE DAY TO DAY DISCOVERIES REVEALED THAT THE KNOWN ARCHAEA ARE ONLY THE TIP OF THE ICEBERG IN TERMS OF ARCHAEAL DIVERSITY. THIS NEWLY DISCOVERED DIVERSITY IMPLIES THAT ARCHAEA ARE MORE IMPORTANT FOR THE CYCLING OF ELEMENTS (C, N, S, FE, ETC.). IN NATURE MICRO ORGANISMS CONVERT DIFFERENT NITROGEN SPECIES INTO ONE ANOTHER AND GAIN ENERGY FOR GROWTH. COMPOUNDS OF THE NITROGEN CYCLE ALSO HAVE OTHER EFFECTS ON EARTH IN THE GLOBAL SCALE: DESTRUCTION OF THE OZONE LAYER, CONSTITUENTS OF ACID RAIN, WATER POLLUTION AND GLOBAL WARMING. INVESTIGATING THESE CYCLES MAKES US BETTER UNDERSTAND THE BASICS OF OUR	AKARSUBAŞI	ALPER TUNGA		ISTANBUL TECHNICAL UNIVERSITY	MOLECULAR BIOLOGY AND GENETICS DEPARTMENT		15-04-08	15-04-11	TUBITAK-Environment, Atmosphere, Earth and Marine Sciences Research Grant Committee	TURKEY
106K054		MEDITERRANEAN REGION UNDERWATER ARCHEOLOGY AND RESEARCH PROJECT (UNDERWATER CULTURAL HERITAGE AND WRECKS)	SHIP, SHIPWRECK, HARBOUR; ANCHOR, SEA TRADE	PROJECT AIMS TO ENLIGHTEN THE UNKNOWN FEATURES OF MARITIME HISTORY OF MEDITERRANEAN REGION, TOTALLY IT WAS STUDIED ON 47 WRECKS, 15 UNDERWATER ARCHITECTURAL REMAINS AND 10 POTENTIAL WRECK AREAS AND 11 ANCHORING BERTH. 225 ANCHORS WHICH BELONG TO DIFFERENT CENTURIES WERE FOUND. AT THIS TIME OVERALL IN 115 REGIONS, THERE WERE 449 SCUBA DIVING ACTIVITIES AND ALMOST 500 HOURS WERE SPENT UNDERWATER. THE PROJECT HAS BEEN THE MOST COMPREHENSIVE ARCHAEOLOGICAL UNDERWATER STUDY THAT WAS REALIZED BY A TURKISH UNIVERSITY, IN OUR COUNTRY'S TERRITORIAL WATERS AND THIS PROJECT LED TO THE ESTABLISHMENT OF AN ACCURATE ARCHIVE OF OUR NATIONAL UNDERWATER CULTURAL HERITAGE. BY THE END OF THE RESEARCHES, SCIENTIFIC DATA OF 3 WRECKS FROM OTTOMAN PERIOD, 16 FROM BYZANTINE PERIOD, 13 FROM ROMAN PERIOD, 11 FROM HELLENISTIC PERIOD AND 2 FROM ARCHAIC PERIOD AND 2 FROM CLASSICAL PERIOD WERE ARCHIVED. THE CARGO WRECKS FOUND DURING THE RESEARCHES WERE MAINLY AMPHORA AND BESIDES THE WARSHIP WRECKS FROM WAR, PLATE, TILE, STONE AND SARCOPHAGUS LOADED SHIPWRECKS SHOWS US THE VARIETY OF CARGO. THE MOST IMPORTANT FEEDBACK OF THE STUDIES IS THE ESTABLISHMENT OF "GEOGRAPHICAL DATA BASE ON	ÖZDAŞ	A.HARUN		DOKUZ EYLUL UNIVERSITY	INSTITUTE OF MARINE SCIENCE AND TECHNOLOGY		01-06-06	01-06-09	TUBITAK-Environment, Atmosphere, Earth and Marine Sciences Research Grant Committee	TURKEY
108K116		INVESTIGATION OF PATARA-WATERWAYS IN POINT OF ARCHEOLOGICAL, ARCHITECTURAL AND WATER RESOURCES ENGINEERING VIEWS	PATARA, DELIKKEMER, WATERWAY, AQUEDUCT, CISTERN	THE INVESTIGATIONS IN ANCIENT CITY PATARA IN THE CONTENT OF THIS PROJECT IN INTERDISCIPLINARY MANNER, ALSO IN ARCHEOLOGY AND WATER RESOURCES ENGINEERING BRANCHES, ARE SUMMARIZED BELOW: ARCHEOLOGY: 1. THE CONVEYANCE LINE ALONG ITS ALL PATH UP TO PATARA SHALL BE CLEANED OUT, BOREHOLES SHALL BE APPLIED IN DUE PLACES, IF NECESSARY; THE DETAILED EXCAVATIONS SHALL BE REALIZED FIRST ON THE AQUEDUCTS DELIKKEMER AND TAVAS AND THEN IN IMPORTANT POINTS OF THE SYSTEM AND SO THE KNOWLEDGE AND FINDINGS SHALL BE OBTAINED TO IDENTIFY DATING AND CONSTRUCTION TECHNIQUE OF THE ELEMENTS. 2. 2. THE WATER DISTRIBUTION NETWORK SHALL BE HANDLED IN SIMILAR WAY AND CLAY PIPE CONNECTIONS, FITTINGS, CISTERNS, WELLS AND RESERVOIRS AND THEIR RELATIONS WITH WETSTRUCTURES, LIKE BATHS, OFFICIAL BUILDINGS, HARBOR FACILITIES, ETC. 3. C14, PHOTOILLUMINANCE, SEDIMENT AND POLLEN ANALYSES SHALL BE PERFORMED ON THE MATERIALS EITHER EXISTING OR EXCAVATED. 4. ALL THE STUDIES SHALL BE DOCUMENTED; THE PROJECTS RELEVANT TO REVELATION AND RESTITUTION OF MONUMENTAL REMAINS, LIKE "DELIKKEMER" REVERSE SIPHON SHALL BE COMPLETED AND THEY SHALL BE SUBMITTED TO THE SERVICE OF CULTURAL TOURISM IN ENVIRONMENTALLY PROTECTIVE MANNER. WATER RESOURCES	IŞIK	HAVVA		AKDENIZ UNIVERSITY	FACULTY OF ARTS, DEPARTMENT OF ARCHEOLOGY, ANTALYA		01-07-08	01-11-11	TUBITAK-Environment, Atmosphere, Earth and Marine Sciences Research Grant Committee	TURKEY

105G024		INVESTIGATION OF BIOENERGY RECOVERY TECHNOLOGIES (BIOMETHANISATION) BY INTEGRATED TREATMENT OF MUNICIPAL WASTEWATERS AND ORGANIC FRACTION OF SOLID WASTES	ACTIVATED SLUDGE, ANAEROBIC BIOTECHNOLOGY, BIOMETHANISATION, ORGANIC SOLID WASTE, MODELING, AND RENEWABLE ENERGY.	THE AIM OF THIS PROJECT IS TO INVESTIGATE RECOVERY TECHNOLOGIES OF RENEWABLE ENERGY (BIOMETHANISATION) THROUGH INTEGRATED TREATMENT OF MUNICIPAL WASTEWATERS AND ORGANIC FRACTION OF SOLID WASTES, PILOTSCALE PRESENTATION OF INTEGRATED SYSTEM TO THE PUBLIC AND PRIVATE ORGANISATIONS AND PUTTING FORTH THE FEASIBILITY OF THIS SYSTEM FOR CONSIDERATION. IN THIS PROJECT, FIRST OF ALL, THE PUBLISHED RESULTS ABOUT TREATMENT OF MUNICIPAL WASTEWATERS AND ORGANIC FRACTION OF SOLID WASTES WILL BE SEARCHED AND REPORTED. THEN, PILOT-SCALE TREATMENT OF THIS SYSTEM WILL BE INSTALLED AND OPERATED FOR 15 MONTHS. THE DATA OBTAINED FROM THIS TREATMENT SYSTEM WILL BE USED FOR DESIGN OF FULL-SCALE TREATMENT SYSTEMS ON THE BASIS OF FEASIBILITY STUDIES. AN APPROPRIATE MATHEMATICAL MODEL WILL BE DEVELOPED AND THEN OPTIMUM OPERATION CONDITIONS WILL BE DETERMINED. AT LAST, MICROBIOLOGICAL STRUCTURE OF THE SLUDGE IN THE PILOT PLANT BIOLOGICAL UNITS WILL BE CHARACTERIZED. THUS, ENGINEERING SOLUTIONS FOR PRACTICAL APPLICATIONS CAN BE DEVELOPED BY USING MICROBIAL DATA OBTAINED FROM CORRELATION BETWEEN MICROBIAL CHARACTERISTICS OF BIOMASS POPULATIONS (MOLECULER	ÖZTÜRK	Prof. Dr. İZZET		İSTANBUL TECHNICAL UNIVERSITY	ENVIRONMENTAL ENGINEERING		01-07-06	01-02-09	TUBITAK-Environment, Atmosphere, Earth and Marine Sciences Research Grant Committee	TURKEY
105G026 - DSİ/SVT		STATE HYDRAULIC WORKS (SHW) WATER DATABASE	WATER RESOURCES, WATER DATABASE					MINISTRY OF ENVIRONMENT AND FORESTRY			01-02-06	01-08-08	TUBİTAK – Public Research Grant Committee	TURKEY
105G041		GENERAL AND TECHNICAL REQUIREMENTS FOR ENVIRONMENTAL REFERENCE LABORATORIES (LIQUID AND SOLID FUEL LABORATORY AND WATER/WASTEWATER, SOIL AND SOLID - WASTE, SLUDGE AND SEDIMENTAL ANALYSIS LABARATORIES) REPORTING TO THE MINISTRY OF ENVIRONMENT AND FORESTRY OF TURKISH REPUBLIC IN ORDER TO SATISFY ISO 17025 'ACCREDITATION CERTIFICATE'	ISO 17025, LABORATORY ACCREDITATION, ACCREDITATION, QUALITY SYSTEM,	THE COUNCIL OF PARTNERSHIP DECISION WITH REFERENCE CODE 1/95 HAS BECOME VALID ON JAN 01 1996, DEPENDING ON THE CUSTOM UNION AGREEMENT SIGNED IN 1995. IN RESPECT OF ITEMS 8 AND 11 OF THE COUNCIL OF PARTNERSHIP DECISION, TURKEY WILL ADOPT EUROPEAN TECHNICAL REGULATIONS WITHIN THE NEXT 5 YEARS AND EUROPEAN UNION'S REGULATION STATING 'REMOVAL OF TECHNICAL DIFFICULTIES IN COMMERCE' WILL BE INCLUDED INTO THE NATIONAL REGULATIONS, THIS MEANS THAT, THE LIST AND THE CONDITIONS OF THE TECHNICAL REGULATIONS OF THE UNION, DESCRIBING STANDARDIZATION, MEASUREMENT, CALIBRATION, QUALITY, ACCREDITATION, TEST AND CERTIFICATION HAS BEEN DETERMINED. IN ACCORDANCE WITH THE EUROPEAN UNION'S REGULATIONS, TOGETHER WITH REQUIRED MODIFICATION IN INSTRUCTIONS, IT WILL BECOME MANDATORY TO DO THE TESTS AND ANALYSIS IN ACCREDITED LABORATORIES. IN THE PROJECT SCOPE, A STUDY WILL BE APPLIED TO FULFILL THE REQUIREMENT OF TS EN ISO IEC 17025 'ACCREDITATION CERTIFICATE' STANDARD STATING 'GENERAL CONDITIONS FOR TEST AND CALIBRATION LABORATORIES' SUFFICIENCY' FOR THE FOLLOWING ENVIRONMENTAL REFERENCE LABORATORIES REPORTING TO "THE MINISTRY OF ENVIRONMENT AND FORESTRY OF TURKISH REPUBLIC", LIQUID AND SOLID FUEL LABORATORY AND	ATAÇOĞLU	IŞIL		TUBİTAK MARMARA RESEARCH CENTER	ENVIRONMENT INSTITUTE		15-08-06	15-05-08	TUBİTAK – Public Research Grant Committee	TURKEY
108M149		DETERMINATION OF POTENTIAL JEOTHERMAL ENERGY IN BALIKESIR AND THE CASE STUDY FOR EXAMINING THE GONEN GEOTHERMAL DISTRICT HEATING SYSTEM FOR INCREASING USAGE EFFICIENCY	RENEWABLE ENERGY, GONEN GEOTHERMAL, ENERGY EFFICIENCY, DISTRICT HEATING SYSTEM	THE 108M149 PROJECT, WHICH WAS BEGUN IN JUNE, 2008 AND TOOK 3.5 YEARS INCLUDING EXTRA 6 MONTHS, THANKS TO TÜB?TAK'S SUPPORT HAS TWO MAIN GOALS. THE FIRST ONE IS TO FIND OUT THE ACTUAL POWER PRODUCTION VALUES OF GEOTHERMAL ENERGY RESOURCES LOCATED IN THE FOUR FIELDS OF BALIKESIR WHICH ARE RICH IN POTENTIAL (GÖNEN, BIGADIÇ, EDREMIT AND GÜRE). THE SECOND ONE IS TO EXAMINE THE GONEN GEOTHERMAL DISTRICT HEATING SYSTEM (GDHS), THE FIRST GDHS OF TURKEY, IN DETAILS WITH THERMODYNAMIC APPROACH. IN THIS EXTEND, OVER A ONE-YEAR PERIOD THE OPERATION PARAMETERS OF GONEN GDHS WAS MONITORED BY USING FIXED AND PORTABLE MEASURING DEVICES AND ALL THE DATA NEEDED FOR THE CALCULATIONS WERE COLLECTED. ENERGY AND EXERGY ANALYSIS OF THE SYSTEM AND ITS MAIN COMPONENTS WAS CARRIED OUT FOR WINTER, SUMMER AND TRANSITION SEASONS SEPARATELY, CONSIDERING THE SEASONAL CHANGES IN THE HEATING LOAD OF THE SYSTEM. SIMILARLY THE BIGADIÇ GDHS WAS MONITORED OVER A ONE-YEAR PERIOD AND SYSTEM PARAMETERS WERE ANALYZED. BESIDES, FLOW RATE AND TEMPERATURE MEASUREMENTS WERE EXTENDED TO INCLUDE GÜRE AND EDREMIT GDHSS AND THE ACTUAL POWER POTENTIAL OF GEOTHERMAL ENERGY IN BALIKESIR WAS DETERMINED IN	YÜKSEL	BEDRİ		BALIKESİR UNIVERSITY	FACULTY OF ENGINEERING, MECHANICAL ENGINEERING		15-06-08	15-12-11	TUBİTAK – Engineering Research Grant Committee	TURKEY

106M231		ANALYSIS OF POTENTIAL INNOVATIONS OFFERED TO GEOTECHNICAL ENGINEERING BY ADVANCED TECHNOLOGY FOR MEASURING WATER CONTENT OF SOILS HEATING SYSTEM	SOIL WATER CONTENT, PORE WATER, SLOPE STABILITY, FINITE ELEMENT METHOD, NUMERICAL ANALYSIS	USABILITY AND ACCURACY OF TRADITIONAL AND ADVANCED TECHNOLOGY BASED METHODS FOR MEASURING WATER CONTENT OF SOILS WERE INVESTIGATED. POTENTIAL INNOVATIONS OF THE NEW MEASUREMENT TECHNIQUES WERE ALSO DISCUSSED. SOIL WATER CONTENT IS TRADITIONALLY DETERMINED IN CONVENTIONAL OVENS BY DRYING THE SAMPLES UP TO 24 HOURS, WHICH IS NOT DESIRED FOR MANY APPLICATIONS; HENCE, FASTER ALTERNATIVES ARE SOUGHT. RAPID METHODS ARE BASED EITHER ON DRYING, USING SUCH AS MICROWAVES, DIRECT HEATING AND INFRARED HEATING OR ON INDIRECT MEASUREMENTS USING SUCH AS NUCLEAR, CALCIUM CARBIDE GAS PRESSURE AND DIELEKTRIK METHODS OF SEVERAL VARIATIONS. AUTOMATIC AND REPEATABLE MEASUREMENT OF WATER CONTENT OF SOILS THROUGH SENSORS USING DIELECTRIC METHODS MAY OFFER POTENTIALLY SIGNIFICANT OPPORTUNITIES IN GEOTECHNICAL ENGINEERING. ACCURACY AND POTENTIAL OF THREE SUCH PROMISING SENSORS WERE INVESTIGATED AND FINDINGS OF THE STUDY ARE PRESENTED IN THIS REPORT. INFRARED DRYING WAS TO HAVE PRACTICALLY THE SAME ACCURACY AS THE CONVENTIONAL OVEN METHOD WITH TIME SAVINGS OF 80%. ACCURACY OF THE DIELECTRIC METHODS FOR SANDY SOILS WAS FOUND TO BE ACCEPTABLE BUT IT WAS FOUND UNACCEPTABLE FOR CLAYS AND SILTS, NEEDING FURTHER DEVELOPMENT EFFORTS. BY ADVANCED	ARSOY	SAMİ		KOCAELİ UNIVERSITY	FACULTY OF ENGINEERING, CIVIL ENGINEERING		01-09-06	01-10-09	TUBİTAK – Engineering Research Grant Committee	TURKEY
106M043		DETERMINATION OF THE HYDROELECTRIC POTENTIAL IN UNGAUGED OR POORLY GAUGED BASINS NUMERICAL ANALYSIS	RIVER BASIN, REMOVE SENSING, GEOGRAPHICAL INFORMATION SYSTEM, UNGAUGED BASIN, FLOW DURATION CURVE, MULTI-REGRESSION ANALYSIS, FUZZY LOGIC, HYDROELECTRIC POTENTIAL. GAUGED BASINS NUMERICAL ANALYSIS	THE POWER OF A HYDROELECTRIC PLANT IS DEPENDENT ON STREAMFLOW AND WATER HEAD. IN THIS STUDY, DETERMINATION OF THE HYDROELECTRIC POTENTIAL IN UNGAUGED OR POORLY GAUGED BASINS IS EXAMINED. THE EASTERN BLACK SEA REGION IS CHOSEN AS AN APPLICATION AREA WITH GREAT PRECIPITATION AND THE LARGE DROP IN ELEVATION, AND ITS REGION, SOLAKLI BASIN IS SELECTED AS A PILOT AREA. THE BASIN PARAMETERS ARE OBTAINED FROM THE SATELLITE IMAGES BY REMOTE SENSING AND PRECIPITATION MAPS DERIVED USING VARIOUS METHODS TO ESTIMATE EXPECTED MONTHLY AND ANNUAL STREAM FLOW IN CERTAIN SECTIONS OF THE BASIN. FOR FLOW FORECASTING, FLOW DURATION CURVE METHOD, MULTIPLE REGRESSION EQUATIONS, ARTIFICIAL NEURAL NETWORKS AND FUZZY LOGIC METHODS ARE USED. NEW SCIENTIFIC AND PRACTICAL APPROACHES ARE DEVELOPED FROM MENTIONED METHODS. THE FLOW VALUES WHICH ARE CALCULATED BY MEANS OF DIFFERENT METHODS ARE COMPARED WITH EACH OTHER. THE HYDROPOWER IS CALCULATED BY THESE METHODS HAVE BEEN IMPLEMENTED ON POTENTIAL WATER INTAKE LOCATIONS AND HYDROELECTRIC STATION IN THE SELECTED PILOT AREA. THE HYDROPOWER VALUES AND ALL BASIN PARAMETERS ARE VISUALIZED USING GEOGRAPHICAL MATION SYSTEMS (GIS). HYDROELECTRIC POWER COMPUTED BY VARIOUS METHODS IS ALSO COMPARED WITH THE SIMPLE CONVENTIONAL	AĞIRALİOĞLU	NECATİ		İSTANBUL TECHNICAL UNIVERSITY	CIVIL ENGINEERING		01-10-06	01-10-09	TUBİTAK – Engineering Research Grant Committee	TURKEY
104M214		TREATMENT OF TEXTILE WASTEWATERS IN SUPERCRITICAL WATER CONDITIONS	TEXTILE WASTEWATERS, TREATMENT, SUPERCRITICAL WATER, OXIDATION, REACTION KINETICS	VARIOUS INDUSTRIAL WASTEWATERS CONTAIN EXTREMELY TOXIC ORGANIC CHEMICALS. CHEMICAL, TEXTILE, PAPER, PHARMACEUTICALS AND AGRICULTURAL PESTICIDES CAN BE LISTED AMONG THE INDUSTRIES WHICH PRODUCE TOXIC WASTEWATERS. DUE TO THE INCREASING LEGAL PRESSURES FOR THE COMPLETE TREATMENT OF WASTEWATERS, INDUSTRIES ARE SPENDING MAJOR EXPENDITURES FOR THE TREATMENT OF TOXIC WASTEWATERS. HENCE, MANY TECHNOLOGICAL APPLICATIONS ARE BEING TESTED FOR THIS AIM. TEXTILE WASTEWATERS CONTAIN MANY ORGANIC POLLUTANTS WHICH ARE IN THE FORM OF DISSOLVED IN WATER AS TO KIND OF DYE USED. SINCE THE DYES USED IN THE TEXTILE INDUSTRY HAVE VERY COMPLEX CHEMICAL STRUCTURES AND ARE OF SYNTHETIC ORIGIN, THE TREATMENT OF TEXTILE WASTEWATERS ARE DIFFICULT AND EXPENSIVE. ORGANIC POLLUTION AND COLOR ARE THE MAIN POLLUTING PARAMETERS FOR WHICH THE TREATMENT PROCESS IS DIFFICULT, DUE TO THE PROPERTIES OF THE DYES USED IN TEXTILE WASTEWATER, ESPECIALLY ORGANIC MATERIALS WITH RESISTANCE TO BIOLOGICAL DEGRADATION (LOW BOİ 5/KOİ RATIO). IN RECENT YEARS, THE REMOVAL OF ORGANIC POLLUTANTS AND HEAVY METALS FROM WASTEWATER IN SUPERCRITICAL WATER MEDIUM HAS BECOME A DEVELOPING TECHNOLOGY, THEIR APPLICATION TO	AKGÜN	MESUT		YILDIZ TEKNİK UNIVERSITY	CHEMICAL ENGINEERING		01-04-05	01-06-08	TUBİTAK – Engineering Research Grant Committee	TURKEY

106M365		DEVELOPMENT OF FORECAST MODELS BY ADAPTIVE ARTIFICIAL NEURAL NETWORKS DESIGN FOR ELECTROCHEMICAL TREATMENT OF DOMESTIC WASTEWATER REACTION KINETICS	DOMESTIC WASTEWATER, ELECTROCHEMICAL WASTEWATER TREATMENT, ELECTROCHEMICAL OXIDATION, ELECTROCHEMICAL DEGRADATION, REACTION KINETICS, RESPONSE SURFACE METHODOLOGY (RSM), OPTIMIZATION, ARTIFICIAL NEURAL NETWORK, ANFIS	ARTIFICIAL NEURAL NETWORKS ARE ARTIFICIAL INTELLIGENCE TECHNIQUES BASED ON THE SIMPLIFIED SIMULATION OF BIOLOGICAL NEURONS IN HUMAN BRAIN. THE AIM OF THIS PROJECT WAS TO DEVELOP PREDICTIVE MODELS OF ELECTROCHEMICAL WASTEWATER TREATMENT PROCESS USING ADAPTIVE NEURO FUZZY INFERENCE SYSTEM (ANFIS) DESIGN. THE ELECTROCHEMICAL OXIDATION OF DOMESTIC WASTEWATER WAS INVESTIGATED IN DETAIL IN ORDER TO TRAIN THE ARTIFICIAL NEURAL NETWORK AND TO BUILD AN ASSOCIATIVE MEMORY WITH THIS PROJECT. THE DOMESTIC WASTEWATER WAS SIMULATED AND PREPARED IN OUR LABORATORY WITH THE ACTUAL CHEMICALS AND COMPOSITIONS IN ORDER TO MAINTAIN AN ACTUAL WASTEWATER THROUGHOUT THE STUDY. THE CENTRAL COMPOSITE DESIGN (CCD) IN RESPONSE SURFACE METHODOLOGY (RSM) WAS APPLIED FOR THE BATCH ELECTROCHEMICAL RUNS, AND THE INFLUENCES OF OPERATING PARAMETERS OF WASTEWATER COMPOSITION, CURRENT DENSITY, ELECTROLYTE CONCENTRATION, REACTION TEMPERATURE, AND REACTION TIME WERE INVESTIGATED ON THE ELECTROCHEMICAL OXIDATION. IN THE STUDY, REMOVAL EFFICIENCY, ENERGY CONSUMPTION AND CURRENT EFFICIENCY VALUES WERE CALCULATED, THE MODEL ADEQUACY WAS CHECKED AND THE OPERATING PARAMETERS WERE COMPARED WITH PROCESSING THE DATA USING RESPONSE	KÖRBAHTİ	BAHADIR KÜRŞAD		MERSİN UNIVERSITY	CHEMICAL ENGINEERING		01-02-07	01-02-10	TUBİTAK – Engineering Research Grant Committee	TURKEY
106M332		USAGE OF ULTRASOUND TECHNOLOGY AND UV IN TEXTILE INDUSTRY	ULTRASOUND, SONOCHEMISTRY, ENZYMATIC DESIZING, ENZYMATIC SCOURING, BLEACHING, AMYLASE, PECTINASE	USAGE OF ULTRASOUND TECHNOLOGY IN TEXTILE INDUSTRY IS VERY INTERESTING. IN THIS STUDY, IT HAS BEEN AIMED TO INVESTIGATE THE EFFECTS OF ULTRASOUND ON TEXTILE PRETREATMENT PROCESSES AND THE FACTORS THAT AFFECT THE EFFICIENCY OF ULTRASOUND TECHNOLOGY HAVE BEEN INVESTIGATED AND SOME EXPERIMENTS ON THE EFFECTS OF BATH-VOLUME AND TEMPERATURE ON THE POWER DISPERSION IN AN ULTRASONIC BATH HAVE BEEN PERFORMED.ACCORDING TO RESULTS, TEMPERATURE AND VOLUME OF THE BATH ARE IMPORTANT PARAMETERS FOR DISTRIBUTION OF PRESSURE IN THE BATH. IN CONCLUSION, IT HAS BEEN COMPARED DESIZING DEGRESS, HYDROPHILITIES AND WHITENESS DEGREES OF TREATED FABRICS IN ULTRASONIC BATH. AT THE END OF THE EXPERIMENTS, IT HAS BEEN FOUND THAT SUCH SAVINGS “THERMAL ENERGY, WATER AND CHEMICALS” CAN BE ENSURED EASILY WITH THE USAGE OF ULTRASOUND TECHNOLOGY. INTRODUCING ULTRASONIC ENERGY DURING ENZYMATIC TREATMENTS OF COTTON FABRIC SIGNIFICANTLY IMPROVES ENZYME EFFICIENCY. IF THE TEMPERATURE AND BLEACHING TIME HAVEN’T BEEN PARAMETERS, ULTRASOUND ENERGY WITH BLEACHING AGENTS LIKE HYDROGEN PEROXIDE, PERBORATE NATRIUMCHLORITEAND PERSULPHATE COULDN’T INFLUENCE WHITENESS DEGREE OF THE FABRIC SIGNIFICANTLY. PH VALUES OF THE BATH WITHOUT	DURAN	KERİM		EGE UNIVERSITY	FACULTY OF ENGINEERING, TEXTILE ENGINEERING		01-12-06	01-12-09	TUBİTAK – Engineering Research Grant Committee	TURKEY