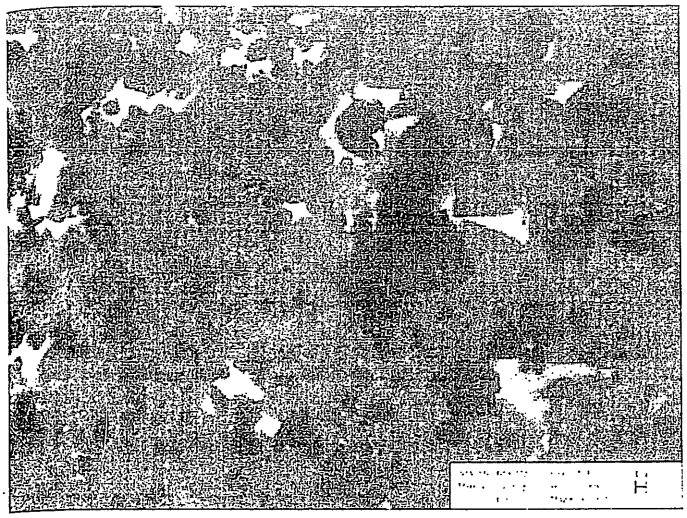

Figure 1. SEM-BSE image of B4C-Al composite

Ref no: 169 **Abstract:** 0349

Session 07: *Composite materials*

CRACK INITIATION AND PROPAGATION OF COMPOSITE COMPACT TENSION SPECIMEN USING EXTENDED FINITE ELEMENT METHOD

Mohammed Yahya Abdellah[1], Mohamed K. Hassan1[1], H. M. Abu El Ainin[2], A. M. Hashem[1]

[1]South Valley University, Qena, Egypt

[2]Minia University, Minia, Egypt

EXtended Finite Element Method (XFEM) is newly technique in finite element approaches to study the fracture properties of composites laminates. The compact tension test specimen is commonly used as Stander test for measuring fractures toughness of isotropic material. It is used to standardize for Quasibrittle materials like Glass fiber composite laminates. The XFEM simulation gives good agreement for both crack initiation load and crack propagation load of the compact tension glass fiber composite laminates of stacking sequence [0,90]2s. It is also give good way to define the critical section.

Ref no: 170 **Abstract:** 0353

Session 07: *Composite materials*

THE EFFECT OF PARTICLE SIZE OF CALSIUM CARBONATE ON THE HOOP STRESS OF HIGH DENSITY POLYETHYLENE PIPES

Levent Sözen[1], Şenol Şahin[2]

[1]Magna Exteriors & Interiors Turkey

[2]Kocaeli University

In this experimental study, the short term hydrostatic internal pressure features depending calcium carbonate's particle size, of calcium carbonate (CC) filled high density polyethylene (HDPE) pipe was studied. About HDPE material features, there are many studies that notify the effects of particle size of calcium carbonate and amount of calcium carbonate filler. In these studies, the experiment samples were produced by the production methods that are applied high compression forces (injection molding, hot press etc.). Based on the results of the uniaxial tensile test, if the amount of calcium carbonate filler is increased and the particle size of calcium carbonate is become smaller, it is known that the stiffness of the composite (HDPE / CC) increases and the yield stress of the composite decreases. Pipe practitioners requested that the stiffness of the both pressurized and unpressurized pipe that are implemented over ground and under ground, need to be as high as possible. Nowadays, the layered pipes which stiffness and yield stress of its is magnified as much as possible are produced by single screw co-extrusion method. Layered pipes which intermediate layer of its is thermoplastic composite material are used in transfer systems. But, there is no CC filled HDPE composite pipe that is produced by single-screw extrusion method. Therefore, the HDPE/CC composite pipe's behaviors under hydrostatic internal pressure (biaxial tensile test) are still indefinite. In this scope, to investigate the HDPE/CC composite pipe's behaviors under hydrostatic internal pressure depends on the particle size of calcium carbonate is the objective of the study. For this purpose, the goal of the study is that to obtain new CC filled HDPE composite pipe that the stiffness of it is higher than pure HDPE pipe. To observe the effects of the particle size is used three different average particle size (d0.5) that are 1,65 μm, 2,15 μm and 5.00 μm. The pure HDPE pipe and the HDPE/CC composite pipes that are filled amount of 10% CC volume rate are produced by single-screw extrusion method at Ø63. The pipes were applied hydro static internal pressure test in 20oC water pool as 1 hour and 100 hours. The experimental results show us that the performance of the hyrostatic internal pressure of HDPE/CC composite pipe is depend on the particle size of CC. It is detected that the increase of the amount of CC reduces the hoop stress of the pure HDPE pipe, but the decrease of the particles size of CC increases the hoop stress of HDPE/CC composite pipe. Also, to guess about the damage period of the pipes, the damage areas of the HDPE/CC composite pipes were investigated macroscopicly.

Ref no: 171 **Abstract:** 0354

Session 07: *Composite materials*

THE EFFECT OF PARTICLE SIZE OF CALCIUM CARBONATE ON THE FRACTURE TOUGHNESS OF POLYPROPYLENE BLOK COPOLYMER

Elif Gülşah Yıldız[1], Şenol Şahin[2], Tülin Şahin[2]

[1]Department of Metallurgical and Materials Engineering, Graduate School of Natural and Applied Science, Istanbul Techincal University, Istanbul, Türkiye

[2]Department of Mechanical Engineering, Kocaeli University, Kocaeli, Türkiye

In this experimental study, the bending fracture toughness properties of calcium carbonate (CC) filled polypropylene block copolimer (PPB) composite had been studied according to its CC particle size. There are lots of studies for determining effects of CC particle size and/or CC filler amount to mechanical properties of PP. In these studies, unaxial and short-term comparison tests are performed on related test samples after their production. It's clearly known from unaxial and short-term comparison test results that stiffness, yield stress and impact strength of PP/CC composite increases with increasing of CC filler amount and decreasing of CC particle size. The continuous strength (life or time) values of materials are usually obtained as a result

of long-term tests also after production. It's known that tensile strength of polypropylene based material is decreased depending upon time after production. But changes in bending fracture toughness properties of PPB/CC composites after a long storage period which follows its production are still unclear. To have related results, the aim of this study is to compare the fracture toughness depending upon CC particle size between pure PPB and PPB/CC composites which were stored at a place which have no daylight. According to this aim for analysing the effect of particle size, two different CC filler with average particle sizes (d0.5) of 2,15 μm and 5.00 μm were choosen. Pure PPB and CC filled PPB composite samples with filler amount of 10% volume fraction for referred particle sizes were prepared by injection moulding. These samples were stored no-daylight conditions for three years and then three point bending tests were performed on according to ISO 13586. According to results, it can be said that bending fracture toughness of pure PPB had increased due to entering of CC filler particles to structure. However this increasing effect was obtained more powerfully with decrease on CC particle size. Another important result of this study is that according to SENB test load – displacement graphs particulate filled composite properties are between pure plastics and plastics containing discontinuous reinforcing fibres in according to ISO 13586.

Ref no: 172 **Abstract:** 0397

Session 07: *Composite materials*

INJECTION PARAMETERS OPTIMIZATION FOR TENSILE PROPERTIES OF CALCIUM CARBONATE FILLED POLYPROPYLENE HOMOPOLYMER COMPOSITE MATERIAL VIA EXPERIMENTAL DESIGN

Yıldız Yuluğkural[1], Şenol Şahin[2], Eren Duygun[2]
[1]Industrial Engineering Departmant, Kocaeli University, Kocaeli, Türkiye
[2]Mechanical Engineering Department, Kocaeli University, Kocaeli, Türkiye

In this experimental design study, tensile strength optimization of the calcium carbonate (CC) filled polypropylene homopolymer (PPH) composite, depending on the injection parameters studied. Small or large, the kitchen or the bathroom, electrical or electronic home appliances and computer equipment and technologies are also made of polypropylene (PP) is a raw material widely used. Apply pressing force is much larger than the shape of the mold cavity injection molding method, a result of cooling used in the production of semi-finished and finished products. Charge / volume / performance ratio (rate) is much better than other conventional thermoplastic materials. However, the cost and / or rigidity and thermal performance, etc. due to reasons such as talc, calcium carbonate, micro-particle-filled and glass fiber reinforced polypropylene homopolymer (PPH) composite raw materials in manufacturing semi-finished and finished products are more preferred. Polypropylene (PP) material, the mechanical properties of many studies indicating that the effect of CC is the amount of filler. Also PP / CC composite mechanical properties of the material is available in different studies examining the effect of injection parameters. These studies also compared with a single-axis and short-term production test specimens after testing are applied. In this respect, the experimental design (Taguchi) method, production hours, day light (daylight) are not stored in conditions of comfort PPH / CC composite material object of study is the optimization of the injection parameters on the Charpy impact strength.

To examine the effect of injection parameters, the injection pressure, the inner material (melt) and mold temperature (cooling water) temperatures impose conditions used. CC-filled 30 percent by weight of the composite samples at different injection parameters based on Taguchi experimental design method of injection molding is produced. Samples without daylight, comfort conditions, stored for 12 months. Tensile tests were performed according to the standard ISO 527 samples. By this experimental study, parameter optimization for tensile properties of the PPH / CC composite have been revealed.

Ref no: 173 **Abstract:** 0409

Session 07: *Composite materials*

PROPERTIES OF SIZED CARBON FIBER REINFORCED POLY(BUTYLENE TEREPHTHALATE) COMPOSITES

Nevin Gamze Karslı Yılmaz[1], Cem Özkan[2], Ayşe Aytaç[1], Veli Deniz[1]
[1]Department of Chemical Engineering, Kocaeli University, 41380, Turkey
[2]Department of Polymer Science and Technology, Kocaeli University, 41380, Turkey

Poly(butylene terephthalate) (PBT) is an important thermoplastic engineering material with good electrical properties and processability and it is generally used in electric, electronic and communication industry. However, mechanical properties of PBT matrix are insufficient and this limits their applications in a broad range of industrial fields. Besides, carbon fiber reinforced PBT matrix composites give better outstanding mechanical properties as well as their light-weight characteristics thus carbon fiber reinforcement expends PBT matrix composites' application field. On the other hand, mechanical properties of composites are not only linked to intrinsic properties of carbon fiber and polymer matrix, the interface adhesion between them also plays an important role too. Because, better adhesion at the fiber/matrix interface allows efficient stress transfer from matrix to fiber and this results in better mechanical properties. For obtaining better adhesion between fiber and matrix so many methods were developed. While some of them focus on the matrix modification, some of them focus on the fiber surface modification. Sizing is one of the fiber surface modification methods, in this method it is aimed to improve the wettability of fiber surface and for this purpose carbon fibers coated by a thin polymeric layer. The aim of this study is to investigate the sizing agent type on the mechanical and morphological properties of carbon fiber reinforced PBT matrix composites. PBT (Tecodur®) was supplied from Interplast (Turkey). Unsized CF and CFs which were sized with five different kind of sizing agent were supplied from Turkey. These sizing agents were polyurethane (PU), polyamide (PA), polyimide (PI), phenoxy (PHE) and epoxy/phenoxy (EPO_PHE). PBT was dried in a vacuum oven at 120 °C for 8 h before the compounding process. CF loading level in the composites was fixed at 30% by weight and fiber length was 0.6 cm. The composites were processed in a DSM Xplore micro-compounder at 255 °C, 100 rpm and 3 min. All the compounds were molded by using a laboratory scale injection molding machine (DSM Xplore 12 ml Micro-Injection Molder) with barrel temperature 255 °C, mold temperature

Committee VI
Sponsors VII
Scientific Program VIII
Abstracts of Plenary Speakers 1
Abstracts of Invited Speakers 3
Oral Presentations 15
Posters 129
Biographies 273
Author Index 287

16TH SEPTEMBER, MONDAY

17:00 - 19:00	Registration
19:00	Welcome Cocktail

17TH SEPTEMBER, TUESDAY

	Hall 1	Hall 2	Hall 3	Hall 4
08:30 - 09:00	**Opening Ceremony**			
09:00 - 09:45	Advanced Materials Laureate Opening Lecture: **ANTHONY P.F TURNER - Printed Bioelectronics (Hall 1)**			
	Nanomaterials	**Optical, Electrical, and Magnetic materials**	**Biometerials**	**Composite materials**
	Session Chair: **H. KOBAYASHI**	Session Chair: **S. İÇLİ**	Session Chair: **A.P.F. TURNER**	Session Chair: **L.C. CHEN**
10:00-10:30	Advanced Materials Medal Lecture: **A. TIWARI** (Sweden) Inteligent nanosystems for biomedical devices	Invited Talk: **C. OW-YANG** Solution-processed LiF for work function tuning in electrode bilayers	The Nano Award Lecture: **A. MERKOÇİ** Tunning biosensor response by nanomaterials and signal transducing arquitectures	Invited Talk: **R. MUÑOZ-ESPÍ** Colloidal Systems as Scaffolds in the Formation of Organic/Inorganic Hybrid Nanoparticles
10:30-10:50	Versatile preparation of hybrid nanoaggregates of superparamagnetic iron oxide nanoparticles based on poly(4-vinyl pyridine) block copolymers self-assembly: **Nuno Rocha**	New type of immune biosensor based on the cerium oxide ISFETs for the patulin control in foods: **Nickolaj F Starodub**	Bioactive Electroconductive Hydrogels for the Abio-Bio Interface: **Anthony Guiseppi Elie**	AML Medal Lecture: Effect of transition metal ion doping on morphology and properties of polyaniline: **Saroj K. Shukla**
10:50-11:10	Dielectric response, functionality and energy storage in barium titanate- epoxy resin nanocomposites: **Anastasios C. Patsidis**	Electrochemical Evaluation of Embryoid Bodies of Different Size Using LSI-based Amperometric Sensor: **Mustafa Şen**	Supramolecular derivatives of antioxidants: preparation and physicochemical characterization: **Mino R Caira**	Introduction of antibacterial function to Cu-Al-Ni shape memory alloy: **Canan Aksu Canbay**
11:10-11:30	**Coffee Break + Poster Session (Sessions: 1,3, 4, 5, 8)**			
11:30-11:50	Design and Synthesis of temperature-sensitive bio-hydrogel coated SiO2-Au nano core-shell for photo thermal therapy of cancer cells: **Sarah Majd Jabbari**	Static model for the component GaAs MESFET With High Pinchoff Voltage: **Chahrazed Kaddour**	Structural change of silk fibroin by wet-heating treatment: **Tomoko Hashimoto**	Composites of poly(l-lactide-co-ε-caprolactone) with plasma treated hydroxyapatite: **El Miloudi Khaled**
11:50-12:10	High Temperature Stabilization of Nanocrystalline Fe and Fe-base Alloys: **Hasan Kotan**	The first principles study on the ground state of Zirconia: LDA(GGA)+U method: **Yasemin Öztekin Çiftci**	Biosensors: Functions and Applications: **Morteza Azizollahi Aliabadi**	Improving mechanical and physical properties of microwave and conventionally sintered oxide reinforced PM 316L composites by decreasing powder particle sizes: **Onur Ertugrul**
12:10-12:30	Fine tuning gold nanoparticles monolayer for protein and cell surface recognition: **Zeynep Ekmekci**	Synthesis, electrical and thermal properties of Bi4V2-xNbxO11 (x=0.0 and 0.10) ceramics: **Maheshwar Roy**	Adhesion of mussel foot proteins to the spin labeled surface: **Yaşar Akdoğan**	Analytical electron microscopy study of B4C-Al ceramic - metal composites produced by pressureless melt infiltration technique: **Pinar Kaya**
12:30-14:00	**Lunch Time + Poster Session (Sessions: 1,3, 4, 5, 8)**			
	Session Chair: **A. TIWARI**(Sweden)	Session Chair: **C. OW-YANG**	Session Chair: **A. MERKOÇİ**	Session Chair: **R.MUÑOZ-ESPÍ**
14:00-14:30	IAAM Medal Lecture: **A. TIWARI** (USA) Oxides for Next Generation Spintronics	Invited Talk: **S. İÇLİ** Organic Photoelectric Technologies in Energy Efficiency	AVI Award Lecture: **L. CHEN** Supramolecular Macrocydic Systems as Non-precious Catalysts for Fuel Cells: a Bio-inspired Approach	Invited Talk: **S. VALYUKH** Photonic nanocomposites and their applications
14:30-14:50	DNA-directed silver nanoparticles on graphene oxide and its antibacterial properties against xanthomonas perforans: **Ismail Öçsoy**	Ab initio calculations of some physical properties of magnetic shape memory alloy: Ni2FeGa: **Cengiz Soykan**	Magnetic nanoparticles labeled stem cells: a theranostic approach towards cancer therapy: **Sanjeeb Kumar Sahoo**	A Numerical Study on Thermal Conductivity of Polymer Composites Reinforced with Conductive Fillers: **Ismail Hakki Tavman**
14:50-15:10	A novel method for the synthesis of nanocomposite (TiO2-Cu2O) and its application in degradation of surfactants from aqueous solution by sunlight: **Mohammad Hasan Entezari**	The electronic and magnetic properties of FeM (M=o, S, Se, Te) compounds in Rock-Solt structure: **Ahmad Mohammadi**	A Facile Approach for Controlled Synthesis of Curcumin-loaded Starch-maleate Nanoparticles: **Suh Cem Pang**	Lithium Niobate dispersed Silver Sulphate – A Composite Solid Electrolyte: **Shyamkant Wasudeorao Anwane**
15:10-15:30	High Stable Suspension of Magnetite Nanoparticles in Ethanol by Using Sono-Synthesized Nanomagnetite in Polyol Medium: **Tahereh Rohani Bastami**	Elastic and thermal properties of Sr1-xCaxCoO3: **N K Gaur**	Label-free aptamer based electrochemical biosensors: A simple way to sensitive diagnosis of cancer cells: **Masoud A. Mehrgardi**	Fluorinated surfmers modified clays and their corresponding polystyrene nanocomposites: structure-properties relationship study: **Chahinez Benbayer**
15:30-15:50	**Coffee Break + Poster Session (Sessions: 1,3, 4, 5, 8)**			
	Session Chair: **H. ZAREIE**	Session Chair: **L. ÖZYÜZER**	Session Chair: **L. KOCK**	Session Chair: **S. VALYUKH**
15:50-16:10	Characterization of Nano-Scale Magnesium Borates Hydrothermally Synthesized from Na2B407.5H20, MgCl2.6H20 and H3B03 at 80°C: **Azmi Seyhun Kıpçak**	Current-voltage characteristics of ni/6h-sic schottky barrier: **Metin Özer**	The effect of CaNa2-EDTA on zinc, carbohydrate metabolism and glutamic oxalic, glutamic pyruvic aminotransferases (GOT, GPT) and alkaline phosphatase activities in experimental diabetes: **Zine Kechrid**	Structural performance of laminated fiber reinforced polymer composites manufactured by resin transfer molding and vacuum curing&debulking table: **Erdem Akay**
16:10-16:30	Ph-controlled degradable polyuretahne/silica hybrid nanocapsules: **Matthew Hood**	Electronic and magnetic properties of lithium doped lanthanum manganites: **Ahmed M Ahmed**	Cellular uptake of ceria nanoparticles: **Gülnihal Özek Yelken**	The effect of particle size of calcium carbonate on the fracture toughness of polypropylene blok copolymer: **Elif Gülşah Yıldız**
16:30-16:50	Ultrasonic wave propagation in hexagonal semiconductor nanocrystalline ZnO and BeO compounds: **Pramod Kumar Yadawa**	Exploration of the electro-optic behavior of GaP photodetector in a semiconductor gas discharge device: **Hatice Hilal Kurt**	The impact of process parameters on spray dried Hydroxyapatite-Gelatin composites: **Tuğba Başargan**	Effect of ceramic waste particle fillers in epoxy based resin composite for a composite tile-application: **Saijit Daosukho**
16:50-17:10	Expandable Polyethylene Based Nanocomposite: **Ehsan Rezaei Zare**	Novel synthesis of oxides based phosphors for near UV LEDs lighting and display devices: **V. V. Shinde**	Stimuli responsive three-dimensional conducting electrospun fibrous scaffolds for regenerative medicine: **Yashpal Sharma**	Crack initiation and propagation of composite compact tension specimen using eXtended Finite Element Method: **Mohammed Yahya Abdellah**
17:10-17:30	**Coffee Break + Poster Session (Sessions: 1,3, 4, 5, 8)**			
17:30-17:50	Real and apparent strengths of nanomaterials: **Şule Celasun**	Efficient red emitting Mg6-xCaxBP5O20:0.05Eu3+ (0.025<= x <=0.1) phosphor under near-UV excitation: **Kartik N Shinde**	Smart Theragnosis:Multi Drug Resistance Cancer Perspective: **Hirak Kumar Patra**	The effect of matrix/reinforcement ratio on the physical and mechanical properties of cold pressed and pyrolyzed C/C composite material: **Enbiya Türedi**
17:50-18:10	Extraction of trace amounts copper(II)using octadecyl silica membrane disks modified isocyanate-treated GOs (iGOs): **Ali Moghimi**		Evaluation of the surface properties of biomaterials coated with nanolayers: **Serap Gümüş**	Synthesis of zeolite X-carbon from coal bottom ash: **Nurul Widiastuti**
18:10-18:30	Extraction and Determination of Ni(II) by Histidine functionalized multi-walled carbon nanotubes adsorbed on surfactant coated C18: **Nima Yari**		**18:10-18:40** Invited Talk: **Y. Kumar MISHRA** Fabrication of different nano-microstructures by flame transport synthesis: From electronic to biomedical applications	Reprocessing of fibre reinforced polyethylene composites, effects on mechanical properties: **Ahmet Ünal**
18:30-18:50	Reactive oxygen species (ROS) generation capacity of TiO2 nanocrystals: **Roghayeh Imani**			
18:50-20:00	**Poster Session (Sessions: 1,3, 4, 5, 8)**			

16TH SEPTEMBER, MONDAY

17:00 - 19:00	Registration
19:00	Welcome Cocktail

17TH SEPTEMBER, TUESDAY

	Hall 5	Hall 6	Hall 7
08:30 - 09:00	**Opening Ceremony**		
09:00 - 09:45	Advanced Materials Laureate Opening Lecture: **ANTHONY P.F. TURNER - Printed Bioelectronics (Hall 1)**		
	Polymeric materials	**Energy, Enviromental, and Green Materials**	**Structural and Constructural Materiasl**
	Session Chair: **Y. TAMADA**	Session Chair: **E. ÖZENSOY**	Session Chair: **M.A. GÜLGÜN**
10:00-10:30	Invited Talk: **D. CRESPY** Design of nanocapsules for self-healing applications	Invited Talk: **El KHAKANI** Pulsed KrF-Laser based Synthesis of Highly Photoactive Nanohybrid Structures	Invited Talk: **I. HALASZ** Molecular aspects of micro- and nano-porous silicates
10:30-10:50	Polysiloxanes with conjugated aromatic moieties in their side chains - a potential new materials for OTFT and SAW sensors: **Tomasz Ganicz**	Ion-regulated Photoinduced Electron Transfer in BODIPY-BAPTA Fluorescent Switches: **Pınar Batat**	Homology identification of microstructual evaluation of 13Cr-2Ni-2Mo stainless steel quenched by induction heating: **Kazuaki Nakane**
10:50-11:10	Application of the liquid photopolymerizable membrnes at the creation of the enzymatic biosensors: **Nickolaj F Starodub**	Graphene Nanowall Supercapacitors with Ultra-high Performance: **Kuei Hsien Chen**	Effect of laser heat treatment by scanning laser on mechanical properties of ceramic coated steels: **Hirotaka Tanabe**
11:10-11:30	**Coffee Break + Poster Session (Sessions: 1,3, 4, 5, 8)**		
11:30-11:50	Effect of compatibilizer on the mechanical properties of Polyethylene/Poly(ethylene terephthalate) blends:**Tugba Guven**	Study of carbon-hydrogen bond on the microstructure of ball-milled graphite: **Yinghe Zhang**	Experimental study for detection of ductile fracture in weldments: **Zaoui Moussa**
11:50-12:10	Novel superabsorbent hydrogel composite with non clay mineral aimed at water sustainability: **Judith Pessoa Andrade Feitosa**	Near infra red utilization in dye sensitized solar cells by incorporation of up-converting phosphor nanoparticles: **Atif Khan**	Molybdenum arc –sprayed coatings: model of splat solidification and micro-structure development: **Yamina Mebdoua**
12:10-12:30	Mechanical characterization of glass fiber reinforced polymer resin incorporating waste glass aggregate: **Onur Üzüm**	Influence of deposition Process on the Bandgap and Electrical Properties of TiO2 Solar Cells: **Saad Kadhum Al Sabbagh**	Sintering and Microstructural Investigation of Gamma-Alpha Alumina Powders: **Emre Yalamaç**
12:30-14:00	**Lunch Time + Poster Session (Sessions: 1,3, 4, 5, 8)**		
	Session Chair: **D. CRESPY**	Session Chair: **El KHAKANI**	Session Chair: **I. HALASZ**
14:00-14:30	Invited Talk: **K. MALLICK** In situ polymerization and composite formation' (IPCF): An important route for the tailoring of advanced synthetic materials	Invited Talk: **E. OZENSOY** Understanding Catalytic Materials at the Molecular Level: From Thermal Chemistry to Photochemistry	Invited Talk: **M.A. GÜLGÜN** The Role of Interfaces in an Oxide-Skeleton Carbonate-Matrix Nanocomposite
14:30-14:50	Anton-Paar: Rheology for Advanced Materials: **Gizem Akay**	Controlled Pore Functionalization of Track-etched PVDF Membranes via RAFT Process to yield Functionalized Membrane Electrodes (FMEs): A Powerful Combination of Top-Down and Bottom-Up Processes: **Murat Barsbay**	Synthesis of zeolite-Y templated carbon by carbonization of sucrose as a precursor: **Nurul Widiastuti**
14:50-15:10	Elaboration of new uv powder coatings based on polyamide bio-sourced: **Majed Rejaibi**	The potential of Eco-Friendly Adsorbents from C. equisetifolia Plant Seeds For Dye Removal: **Mohamad Awang**	Abrasion Resistance of Reactive Powder Concrete: The Influence of Water-to-Cement Ratio and Steel Micro-Fibers: **Çağlar Yalçınkaya**
15:10-15:30	Enhanced antistatic durability for metal treated polyester via atmospheric plasma technique: **Merve Özlem Dobur**	Expression and Characterization of Rv0447c product is potentially the methyltransferase involved in tuberculostearic acid biosynthesis in Mycobacterium tuberculosis: **Laxman Singh Meena**	Creep Analysis of Linear Viscoelastic Thin Circular Plates By Finite Element Method: **Barış Tanrıverdi**
15:30-15:50	**Coffee Break + Poster Session (Sessions: 1,3, 4, 5, 8)**		
	Session Chair: **F. TIHMINLIOGLU**	Session Chair: **O. EBİL**	Session Chair: **K. KIDA**
15:50-16:10	Investigation of bonding between PBT and PP via lap-shear test: **Aylin Bekem**	Removal of Nickel from aqueous solutions by activated carbon obtained from seawater algae: **Belhakem Mostefa**	Electrodeposition and characterization of Zn based double-layer coatings on steel surfaces for industrial applications: **Mustafa Toparli**
16:10-16:30	Development of nanocomposites based on polypyrrole and carbon nanotubes for supercapacitors: **Subhash Baburao Kondawar**	Photo-catalytic hydrogen production over iron containing aluminophosphates:**Hentit Hafida**	Effects of laser shock processing on wear properties of 6061-T6 alloy: **Simge Gencalp Irizalp**
16:30-16:50	Synthesis and influence of Ce3+ codopant on the luminescence sensitivity of pyrophosphate phosphor: **Ritesh L Kohale**	Contribution to thermodynamic and kinetic investigations of Pb2+ ions adsorption in the presence of competing Cd2+ ions onto acid-activated clay: **Boufatit Makhlouf**	Identifying mechanical features of concrete material using image processing technology: **Gamze Cankaya**
16:50-17:10	Exploring eb-induced reactive processing to develop novel thermoplastic elastomers: **Kinsuk Naskar**	Magnesium borate synthesis from boric acid sludges at different mole ratios by hydrothermal method: **Azmi Seyhun Kıpçak**	The Use of Electric Arc Spraying coatings Alternative to Hot Dipped and Cold galvanizing: **Nacer Eddine Bacha**
17:10-17:30	**Coffee Break + Poster Session (Sessions: 1,3, 4, 5, 8)**		
17:30-17:50	Attaining prolonged antibacterial efficacy for plasma modified polyamide to obtain an advanced functional textile: **Fatma Betül Demirel**	Radiation induced grafting onto pe/pp nonwoven fabrics for the preparation of atrazine imprinted polymers: **Meshude Akbulut**	Effect of Fe-rich intermetallics on the microstructure and mechanical properties of thixoformed A380 aluminum alloy: **Simge Gencalp Irizalp**
17:50-18:10	Highly chlorine tolerant polymeric coatings for reverse osmosis membranes: **Levent Semiz**	Preparation and characterization of bio-pitch for carbon foam production: **Murat Kılıç**	The investigation of the effects of the hot forging process on the metallurgical and mechanical properties Of 41Cr4 tempered steel and 38MnVS6 microalloyed steel:**Yiğit Erçayhan**
18:10-18:30	Synthesis, microstructure and electrochemical properties of sputter deposited licoo2 thin films: **Obili Mahammad Hussain**	Synthesis of pillared acid-activated clay as a solid-acid catalyst for production of linear alkylbenzene: **Mohammad Hadi Mohammadi**	Growth kinetics of boride layer 316L steel: **Alae Kaouka**
18:30-18:50	Influence of photoinitiators and nanoparticles on hardening of UV-light cured coatings proved by nanoindentation techniques: **Atul Tiwari**	Vanadium-oxo-Sulphate and molybdenum hexa-carbonyl supported on silyl amine functionalized nano-boehmite as a green catalyst:**Mahdi Mirzaee**	The effects of pin geometry on the microstructure and mechanical properties of friction stir welded AZ31 joints: **Hadi Torkamani**
18:50-20:00	**Poster Session (Sessions: 1,3, 4, 5, 8)**		

18TH SEPTEMBER, WEDNESDAY

	Hall 1	Hall 2	Hall 3	Hall 4
09:00 - 09:45	Advanced Materials Medal Lecture: HISATOSHI KOBAYASHI (Hall 1) Nano fibrous materials for tissue engineering applications			
	Nanomaterials	**Optical, Electrical, and Magnetic materials**	**Biometerials**	**Composite materials**
	Session Chair: A.P.F. TURNER	Session Chair: E. ÜNALAN	Session Chair: A. TIWARI (Sweden)	Session Chair: F. TIHMINLIOGLU
10:00-10:30	Invited Talk: S. ÖZÇELİK Chemistry and exciton dynamics of the quantum nanoalloys	Invited Talk: L. ÖZYÜZER Emission of the THz Waves from layered superconductors by the Injection of Spin Polarized Current	IAAM Medal Lecture: L. KOCK The application of novel nanotechnologies to image biomaterials	Invited Talk: O. AKBULUT Utilization of Multiphase Systems (MuPSs) in Separation of Objects
10:30-10:50	Nano-structured silicon as perspective transducer for the immune biosensors: Nickolaj F Starodub	[R1] Half-metallic ferromagnetism in (SrTiO3)n/(LaMnO3)m superlattices: Fabrizio Cossu	Thin Organic Film based Biosensors for Membrane Associated Toxin Detection: Umit Hakan Yildiz	Transparent zirconia/acrylic nanocomposite: Anthony Shiaw Tseh
10:50-11:10	Morphology and Surface Engineering as a Tool for Enhancing Cellular Internalization of Nanoparticles: Didem Sen Karaman	Formation kinetics, morphology and magnetic properties of BaHF ceramics synthesized in x wt%NaCl- (100-x) wt% KCl molten salts: Seray Kaya		Physical, optical and mechanical characterization of organic/inorganic hybrid nanocomposite:Baki Hazer
11:10-11:30	**Coffee Break + Poster Session (Sessions: 2, 6, 7, 9, 10)**			
11:30-11:50	Ceria/Polymer Hybrid Nanoparticles as Catalysts for Organic Reactions: Margherita Mari	Interplay between superconductivity and magnetism in '122' type iron-based superconductors: Sevda Avci	IAAM Medal Lecture: Cell mobility on silk fibroin film -Influence of fibroin primary sequence: Yasushi Tamada	Injection parameters optimization for tensile properties of calcium carbonate filled polypropylene homopolymer composite material via experimental design: Yıldız Yuluğkural
11:50-12:10	TiO2-nanoparticles modified with cetyl trimethyl ammonium bromide as solid sorbent for preconcentration of Parathion prior to determination by gas chromatography: Naser Dalali	Influence of solution pH on the production of Cerium-Substituted Yttrium Iron Garnet ceramic fabricated by using sol-gel process: Ismail Yariçi	Nano-structural control of β-type titanium alloys through severe plastic: Hakan Yılmazer	Thermal and frequency dependence dielectric properties of conducting polymer / fly ash composites: Subhash Baburao Kondawar
12:10-12:30	Graphene/poly cyclic butylene terephtalate nanocomposites: morphology, thermal and dielectric response: Georgios C. Psarras	Nanocrystalline nickel ferrite reinforced conducting polyaniline nanocomposites: Subhash Baburao Kondawar	Thermoresponsive Nanofilms: Mohammed Yaseen	Metal-Phthalocyanine functionalized carbon nanotube as sensor for chloroform vapor: Swasti Saxena
12:30-14:00	**Lunch Time + Poster Session (Sessions: 2, 6, 7, 9, 10)**			
	Session Chair: S. ÖZÇELİK	Session Chair: L. ÖZYÜZER	Session Chair: Ü. H. YILDIZ	Session Chair: Ö. AKBULUT
14:00-14:30	Invited Talk: H. ZAREIE Nanostructures for plasmonic biosensors	Invited Talk: E. ÜNALAN Silver Nanowire Networks	The Nano Award Lecture: J. PIERRE AIME Bioinspired Nanotechnology & High Speed AFM Instrumentation	Invited Talk: O. EBİL Shape Stabilized Composite Zinc Anode for Secondary Batteries
14:30-14:50	Computational Study of Physicochemical Characteristics of Novel Nano Structures of Mitoxantrone Anti-Cancer with Fullerenes in Photo Electron Transfer Process: Behnoud Hormozi	First principles studies on the pressure dependence of chalcopyrite semiconductor ZnSIP2: Irem Öner	Biomaterial functionalization by single step peptide immobilization via Tyr oxidation: Sachiro Kakinoki	Effect of Ni/NiO particles on structure and crack propagation in zirconia based composites: Igor Danilenko
14:50-15:10	Removal of methylene blue, a basic dye, from aqueous solutions uing nano zero- valent iron (NZVI): Simin Arabi	Electrical And Microstructural Properties Of (Cu, Al, In)-Doped Sn02 Films Deposited By Spray Pyrolysis: Sibel Gürakar	Temperature-gated switchable bioelectrocatalytic interface: Onur Parlak	Optimization of wear resistance of Polyurethane Nano-Composite Coatings by using Artificial Neural Network(ANN) and Genetic Algorithm(GA): Ali Haghighat Mesbahi
15:10-15:30	A hybrid functional study of the LaAlO3/SrTiO3 interface: Fabrizio Cossu	Synthesis and influence of Ce3+ codopant on the luminescence sensitivity of pyrophosphate phosphor: Ritesh L Kohale	SPION-based theranosis of Arterial Thrombosis: Suryyani Deb	
15:30-15:50	**Coffee Break + Poster Session (Sessions: 2, 6, 7, 9, 10)**			
	Session Chair: T. SENGER	Session Chair: S. İÇLİ	Session Chair: H. KOBAYASHI	Session Chair: B. HAZER
15:50-16:10	Zirconia core/oligoperoxide shell nanocomposite: aspect of structure: Oksana Gorban	A soft chemical method for fabricating recyclable sers substrate with a zno/ag photocatalyst/sers system: Ahmad Esmaielzadeh Kandjani	Ultrasonic Characterization of aqueous Polyvinyl Pyrrolidone (PVP): Omprakash P Chimankar	Preparation and characterization of bioactive film for edible coating and packaging applications: Ipek Erdogan
16:10-16:30	Nonisothermal crystallization kinetics of Poly(Butylene Terephthalate)/Multiwalled Carbon Nanotubes Nanocomposites:Milind Janardan Kulkarni	Synthesis and optical studies of Dy3+ doped LiAlSi3O8 phosphors: Mrunal D Deshpande	PEO/Fe3O4 Scaffold Production with Electrospinning: Mert Osman Duman	The tensile properties of the calcium carbonate filled high density polyethylene composite pipes in accordance with ISO 6259-1: Hande Akten
16:30-16:50	Preparation and characterization of ceria nanopowders by various precipitation techniques: Gülnihal Özek Yelken	Preparation and Characterization of ITO-metal-ITO Multilayer Thin Films Deposited by DC Magnetron Sputtering: Turgay Çoruhlu	Improvement of stability and activity of immobilized glucose oxidase on modified magnetite nanoparticles: Abdol Khalegh Bordbar	Chemical vapor sensing properties of electrospun nanofibers of polyaniline / ZnO nanocomposites: Subhash Baburao Kondawar
16:50-17:10	Synthesis and structural properties of mesoporous TiO2 photocatalyts by using microwave calcination: Şafak Toygun	Theoretical investigation of triscarbazole derivatives as host materials for blue electrophosphorescence: Seyhan Salman	Characterization of sandblasted and acid etched titanium surfaces for dental implants: Büşra Balli	A novel electrochemical sensor based on graphene nanosheets and carbon nanospheres/chitosan nanocomposite modified glassy carbon electrode: Masoumeh Ghalkhani
17:10-17:30	**Break + Poster Session (Sessions: 2, 6, 7, 9, 10)**			
17:30-17:50	Building a bridge between solution –solid state chemistry: Taimur Athar	Room temperature sputtering of ZnO thin films under gas flow variation for photovoltaic application: Nilufer Evcimen Duygulu	17:30-18:00 Invited Talk: M. ÖZSÖZ Nanomaterials in electrochemical DNA biosensors	Contemporary challenges and opportunities of carbon nanotubes reinforced ceramics nanocomposites: Iftikhar Ahmad
17:50-18:10	Air stable copper nanoparticles for fast reductive degradation of organic dyes in aqueous medium: Razium Ali Soomro	Photophhysical properties and QDLED applications of yellow emitting conjugated polymer:CuInS2/ZnS QD nanoparticles: Nuriye Demir	18:00-18:20 Artificial Cell Membranes for Drug Screening: Ahu Arslan Yildiz	Alumina-Boron Carbide-Aluminum Composites: Ayse Kalemtas
18:10-18:30	Noninteracting Fermi gas in rotating harmonic trap. Exact one–particle density distribution in Fourier space: Bencheikh Kamel	Cadmium Free Window Layer for Thin Film Solar Cell Applications: Material Properties and In-situ Doping: Erkan Aydın		Conductive polymer composites and coated metals as alternative bipolar plate materials for all-vanadium redox-flow batteries: Burak Çağlar
18:30-18:50	Crystallization Process and Microhardness Evolution in as-spun (Al85Co7Y8)98Si2 amorphous alloy: Baris Avar			Synthesis and characterization of cellulose acetate zirconium (IV) phosphate nanocomposite ion exchange capacity: Deepak Pathania
19:00-19:45	TÜBİTAK Ulusal Akademik Ar-Ge Proje Destekleri: Mehmet Ufuk ATAY (Hall 1)			
19:00-20:00	Poster Session (2, 6, 7, 9, 10)			
20:30-23:30	Gala Dinner			

18TH SEPTEMBER, WEDNESDAY

	Hall 5	Hall 6	Hall 7
09:00 - 09:45	Advanced Materials Medal Lecture: HISATOSHI KOBAYASHI (Hall 1) Nano fibrous materials for tissue engineering applications		
	Polymeric materials	**Energy, Enviromental, and Green Materials**	**Structural and Constructural Materiasl**
	Session Chair: V. BULMUS	Session Chair: D. KARABELLİ	Session Chair: I. HALASZ
10:00-10:30	Invited Talk: F. ALEMDAROĞLU Fluoropolymers: versatile polymers through strong bonding	Invited Talk: A. KELARAKIS Functional Nanomaterials for Energy and Sustainability	IAAM Medal Lecture: K. KIDA Changes in three-dimensional magnetic fields of tool steel (JIS-SKS93) around plastic deformation area due to Vicker's indentations
10:30-10:50	Interconnected polypyrrole-polyaniline nanofibers: synthesis, characterization and applications for water treatment: Madhumita Bhaumik	Porous polyurea: a simple pathway to its synthesis and its application as a novel absorbent for dye removal: Xiang Zheng Kong	Effect of reciprocation motion on retained austenite using SAE 52100 steel bars: Koshiro Mizobe
10:50-11:10	Synthesis and characterization of nanofibers of conducting polyaniline and its substitute derivatives: Subhash Baburao Kondawar	Evaluation of the effectiveness of the retention of a pollutant by several depollution methods (using clayey material, complexing organic compound, and phytoremediation): Amel Nasri	Synthesis of silicon carbide and/or silicon nitride from biomass husk through thermoanalytical studies: Muhammad Ali
11:10-11:30	**Coffee Break + Poster Session (Sessions: 2, 6, 7, 9, 10)**		
11:30-11:50	Synthesis of Polyurethane Based Macroinitiator with Fluorescent Properties through ATRP: Dhanraj T Masram	Phase structure and optical properties of rare earth doped tio2powders: Hüsnü Arda Yurtsever	Theory functional calculations (DFT), natural bond orbital, structural properties, and frequency for the two perfluoroalcohols: C4F9OH and C6F5OH: Shahriar Ghamami
11:50-12:10	Production of biodegradable PLA/TPU-talc composites: Şebnem Kemaloğlu Doğan	Remediation of heavy metals contaminated waters using multicomponent nanoparticles: Luis Cumbal	Parametric study of RC beams strengthen with GFRP laminates using ANSYS: Tarak Prafulkumar Vora
12:10-12:30	High density Polyethylene/Zinc oxide nanocomposites for ultra violet radiation shielding: Ahmed Abou Kandil	Green material on a building: Vertical garden: Filiz Çetinkaya Karafakı	Electrochemical sensing platform based on sol-gel/phenothiazine/ enzyme composite films: Alina N. Sekretaryova
12:30-14:00	**Lunch Time + Poster Session (Sessions: 2, 6, 7, 9, 10)**		
	Session Chair: F. ALEMDAROGLU	Session Chair: A. KELARAKIS	Session Chair: S. AKKURT
14:00-14:30	Invited Talk: V. BULMUS Raft-synthesized biohybrid polymers and nanostructures as functional building blocks for bioapplications	Invited Talk: D. KARABELLİ Next generation high energy battery systems- electrode materials	Invited Talk: A. MAKAT WDS: where EDS hits the limits
14:30-14:50	Artifical Neural Network Approach for Determination of Polymers' Mechanical Properties: Fatma Kosovalı Çavuş	Preparation and Thermal Properties of form-stable disodium hydrogen phosphate-myristic acid /zinc oxide composites as phase change materials for thermal energy storage: Zuhal Karagöz	BObservation of fisheye cracks around TiN and Al2O3 inclusions in repeatedly quenched high carbon bearing steel via homology: Kazuaki Nakane
14:50-15:10	Synthesis,SEM, and XRD studies of thin films of Pol(vinyl alcohol)-silica: Mohammad Saleem Khan	Synthesis, microstructure and electrochemical properties of sputter deposited licoo2 thin films: Obili Mahammad Hussain	Synthesis of electroconductive membrane using poly(hydroxymethyl-3,4-ethylenedioxythiopheneco-tetremethylene-Nhydroxyethyl adipamide): Hamidreza Barghi
15:10-15:30	Electroresponsive behavior and dielectric characterization of sodium alginate-poly(acrylic acid) semi-ipn gel films: Gülten Gürdağ	Reaction kinetics for embedded enzymatic degradation of polycaprolactone films: Erhan Ozsagiroglu	Synthesis and Characterization of copolymers containing amino acid: Tensile stress- strain behavior and Dynamic mechanic properties: Birten Çakmalı
15:30-15:50	**Coffee Break + Poster Session (Sessions: 2, 6, 7, 9, 10)**		
	Session Chair: O. EBİL	Session Chair:I. HALASZ	
15:50-16:10	Fabrication and volatile organic vapor sensing properties of pyrene-labelled polystyrene thin film surfaces: Zikriye Özbek	Well-ordered fibrils of crystalline from waste materials as a coagulant with high potential to remove Azo dyes: Dina Morshedi	
16:10-16:30	The effect of ground colemanite on the fracture toughness of polypropylene homo polymer: Tülin Şahin	Recycling of investment casting ceramic molds in production of gas turbine blades: Mohammad Naseri	
16:30-16:50	Study of Electrical Properties of (PVA-BaSO4.5H2O) Composites: Khalid Hussain Hatif Al Attiyah	Removal of reactive black 5 from aqueous solutions by nano-tio2 immobilized on activated carbon: H.Belayachi	
16:50-17:10	Acrylic and cinamic acids as wax crystal modivires: Ali Mohamed El Soll		
17:10-17:30	**Break + Poster Session (Sessions: 2, 6, 7, 9, 10)**		
17:30-17:50	Polymerization of Catechol and Its Derivations by Cationic Porphyrin Catalyst: Zahra Zamiraei		
17:50-18:10	The Effect Of Particle Size Of Calsium Carbonate On The Hoop-Stress Of High Density Polyethylene Pipes: Levent Sözen		
18:10-18:30	Isothermal Degradation Kinetics of Poly(Hydroxybutyrate) and Poly(Hydroxybutyrate-co-Hydroxyvalerate) Nanocomposite Films: Okan Akin		
18:30-18:50	Evaluation of the physical and mechanical properties of rubber compounds reinforced with carbon fiber: Şeyda Polat		
19:00-19:45	TÜBİTAK Ulusal Akademik Ar-Ge Proje Destekleri: Mehmet Yüfuk Atay (Hall 1)		
19:00-20:00	Poster Session (2, 6, 7, 9, 10)		
20:30-23:30	Gala Dinner		

19TH SEPTEMBER, THURSDAY				
	Hall 1	Hall 2	Hall 3	Hall 4
09:00 - 09:45	Plenary Talk: **N. SERDAR SARIÇİFTÇİ (Hall 1)**			
	Nanomaterials-1	**Nanomaterials-2**	**Biomaterials**	**Composite materials-1**
	Session Chair: M. ÖZSÖZ	Session Chair: **L.C. CHEN**	Session Chair: **A.P.F. TURNER**	Session Chair: **F. TIHMINLIOĞLU**
10:00-10:20	Influence of disorder on thermal transport properties of low-dimensional nanomaterials: **Cem Sevik**	Ageing of polyvinylbutyral solutions with impact on spinnability: **Martin Stenicka**	Production and characterization of silica reinforced chitosan composites for orthopedic biomaterial applications: **Sedef Tamburaci**	TMPTA-loaded PU-Based microcapsules show spontaneous polymerization under UV-Radiation: **Zoya Tuiebakhova**
10:20-10:40	Anionic Zeolite-like MOFs for porpane/propylene separation: **Baris Demir**	Stability and release behavior of drug loaded nanoemulsions: **Açelya Çalışkan**	Encapsulation of trans-resveratrol using electrospray method for enhanced stability: **Ceren Sunguc**	Epoxy composites with adjustable colors: **Khodzhaberdi Allaberdiev**
10:40-11:00	A production method for nanosilica-MMA polymer composite marble: **Samah A Abdulaziz**	Super-Hydrophobic activated carbon containing silica aerogel: **Jafarsadegh Moghaddas**	An enzyme catalyzed injectable hydrogel based on tyramine conjugated tragacanth and gelation: **Moslem Tavakol**	Efficient aligned luminescent electrospun composite nanofibers of europium complex Eu(TTA)3phen and polyethylene oxide: **Subhash Baburao Kondawar**
11:00-11:20	**Coffee Break**			
11:20-11:40	Comparative study of the encapsulation of alendronate sodium by the nanoprecipitation and the double emulsion solvent evaporation technique: **Karim Miladi**	Sol-gel polymerization of silica nanoporous gel: rheological study: **Fatemeh Pashaei Soorbaghi**	A novel approach for anti-platelet drug designing: The modulation of nano-surface: **Suryyani Deb**	Properties of Sized Carbon Fiber Reinforced Poly(Butylene Terephthalate) Composites: **Nevin Gamze Karsli Yilmaz**
11:40-12:00	Radiation Induced Synthesis Of In2O3 Nanoparticles by Thermal Decomposition and by Sol-Gel Methods: **Refaat Mohamed Mahfouz**	Tungsten Oxide Nanocrystalls and NOX Sensing Properties: **Mohammad Izadyar**	Synthesis and investigation of novel chitosan and nano-hydroxyapatite based scaffolds for bone tissue engineering: **Mehmet Şenel**	Optical Properties of PVA:CdCl2. H2O Polymer Electrolytes: **Omed Ghareb Abdullah**
12:00-12:20	Analysis of the fluid flow and material deformation in bulk acoustic wave piezoelectric micropumps: **Ersin Sayar**	Mechanical properties of several polymer (nano) composite packaging films: **Zuzana Dujkova**	Effect of annealing temperature on microstructure and surface properties of titanium oxide (TiO2) nanotubes for biomedical applications: Abdurrahman **Halis Güzelaydin**	Hollow fiber solid phase microextraction assisted by modified nanoparticles:An approach to rational microextraction design: **Zarrin Eshaghi**
12:20-14:00	**Lunch Time**			
14:00-14:45	Plenary Talk: **TAHİR ÇAĞIN (Hall 1)** Optimizing Coupling Coefficients of Materials for Energy Conversion Applications			
14:45-14:50	**Closing remark**			

19TH SEPTEMBER, THURSDAY			
	Hall 5	Hall 6	Hall 7
09:00 - 09:45	Plenary Talk: **N. SERDAR SARIÇİFTÇİ (Hall 1)**		
	Nanomaterials-3	**Nanomaterials-4**	**Composite materials-2**
	Session Chair: **S. SARIÇİFTÇİ**	Session Chair: **H. ZAREIE**	Session Chair: **V. BULMUS**
10:00-10:20	Nanofibrous filtering materials with catalytic activity: **Ganna Ungur**	Stability of ZnO nanorods coated on the channel wall under continuous flow conditions: **Berrin Ikizler**	A. C. conductivity in modified PMMA-PVC blends: **Vijay V. Soman**
10:20-10:40	Gold nanorods using as nanosensor for sensing of fe(iii) ions in aqueous: **Dinesh Kumar**	Building multilayers on pulp fibres with cationic and anionic nanofibrilated celluloses: **Sedat Ondaral**	Injection parameters optimization for impact properties of calsium carbonate filled polypropylene homopolymer composite material by experimental desing: **Senol Sahin**
10:40-11:00	Pressure effect on elastic properties of spherocobaltite - A nanoscale simulation study: **Brahim Khalil Benazzouz**	Electronic structure and NMR study of selected doped and functionalized graphene: **Azita Nouri**	Smc manufacture with advanced reinforcement material: **Mahmut Bingöl**
11:00-11:20	**Coffee Break**		
11:20-11:40	Modified arcan tests for concrete with carbon nano tubes: **Sıddık Şener**	Nanoporous composites for Chromium(VI) recovery from Water: A Kinetic and Thermodynamic Approach: **Elif Aslı Şenyuva**	Barrier properties of PE, PP, ionomer and EVA (nano)composite films: **Dagmar Merinska**
11:40-12:00	A Monte Carlo study on dose enhancement effect of various paramagnetic nanoshells in brachytherapy: **Toktam Ahmadi Moghaddas**	Fast and economical route to oxides: tio2 nanostructures: **Shah Mohd Ashraf**	Processing of Co-Continuous B4C-Al Composites: **Ayse Kalemtas**
12:00-12:20	Hydrothermal synthesis of Yb+3 Doped Sb6O13 nanocrystals and their properties: **Elham Ghavidelaghdam**	In Situ Generated Fillers: Morphological Investigation of Poly(MA-alt-α-olefin)(C6-18)/Silica Hybrids: **Deniz Demircan Bozdoğan**	Tribological properties of TiAlCrNbN graded composite coating deposited on AISI H13 steel substrate with pulsed Dc closed field unbalanced magnetron sputtering method: **Levent Kara**
12:20-14:00	**Lunch Time**		
14:00-14:45	Plenary Talk: **TAHİR ÇAĞIN (Hall 1)** Optimizing Coupling Coefficients of Materials for Energy Conversion Applications		
14:45-14:50	**Closing remark**		

COMMITTEE

CONGRESS CHAIR

Anthony P. F. Turner, *Linköping University, Sweden*

EXECUTIVE CHAIRS

Hisatoshi Kobayashi, *President, International Association of Advanced Materials, National Institute for Materials Science, Japan*
Mustafa Güden, *President, İzmir Institute of Technology, Turkey*
Ashutosh Tiwari, *Secretary General, International Association of Advanced Materials, Editor-in-Chief, Advanced Materials Letters, Linköping University, Sweden*

LOCAL ORGANIZING CHAIR

Mustafa M. DEMİR, *Head, Department of Materials Science and Engineering, İzmir Institute of Technology, Turkey*

MEMBERS

Ahmet Emin EROĞLU, *Vice President, İzmir Institute of Technology, Turkey*
Sedat AKKURT, *Vice President, İzmir Institute of Technology, Turkey*
Serdar ÖZÇELİK, *Dean of Science Faculty, İzmir Institute of Technology, Turkey*
Funda TIHMINLIOĞLU, *Dean of Engineering Faculty, İzmir Institute of Technology, Turkey*
Volga BULMUS ZAREIE, *Head, Department of Bioengineering and Biotechnology, İzmir Institute of Technology, Turkey*
Özgenç EBİL, *Department of Chemical Engineering, İzmir Institute of Technology, Turkey*
Cem ÇELEBİ, *Department of Physics, İzmir Institute of Technology, Turkey*
Muhsin ÇİFTÇİOĞLU, *Department of Chemical Engineering, İzmir Institute of Technology, Turkey*
Tuğrul SENGER, *Graduate Dean, İzmir Institute of Technology, Turkey*
Özge TUNUSOĞLU, *İzmir Institute of Technology, Turkey*
Nesrin Horzum POLAT, *İzmir Institute of Technology, Turkey*
Özlem KAP, *İzmir Institute of Technology, Turkey*
Onur PARLAK, *Linköping University, Sweden*

ADVISORY BOARD and SCIENTIFIC COMMITTEE

Chad A Ulven, *North Dakota State University, USA*
Rolf E Hummel, *University of Florida, USA*
Meiping Zhao, *Peking University, China*
Jean-Pierre Aimé, *CNRS - Université Bordeaux, France*
Xiaolin Wang, *University of Wollongong, Australia*
Roy Quinlan, *University of Durham, UK*
Atul Parikh, *University of California-Davis, USA*
Tetsuji Yamaoka, *National Cardiovascular Center Research Institute, Japan*
David Ginley, *National Renewable Energy Laboratory,USA*
B. B. Prasad, *Banaras Hindu University, India*
Ashok Vijh, *Institut de Recherche d'Hydro-Québec, Canada*
Kostya (Ken) Ostrikov, *CSIRO Materials Science and Engineering, Australia*
Jianwen Jiang, *National University of Singapore, Singapore*
Chong Su Cho, *Seoul National University, South Korea*
Alessandro Gandini, *University of São Paulo in São Carlos, Brazil*
Manju Misra, *University of Guelph, Canada*
S. K. Shukla, *University of Delhi, India*
Masoud A. Mehrgardi, *University of Isfahan, Iran*
Li-Chyong Chen, *National Taiwan University, Taiwan*
Arben Merkoçi, *Catalan Institute of Nanotechnology, CIN2 (ICN-CSIC), Spain*
Vandana Singh, *University of Allahabad, India*
Mikael Syväjärvi, *Graphensic AB and Linköping University, Sweden*
Ben Zhong Tang, *The Hong Kong University of Science & Technology, Hong Kong*
Sivakumar Manickam, *The University of Nottingham Malaysia Campus, Malaysia*
C. S. Pundir, *M. D. University, India*
V. K. Gupta, *King Fahd University of Petroleum and Minerals, Saudi Arbia*
Katsuyuki Kida, *Kyushu University,Japan*
Ashok K. Sharma, *DCR University of Science & Technology, India*
Beate Strehlitz, *Helmholtz Centre for Environmental Research - UFZ, Germany*
G. C. Psarras, *University of Patras, Greece*
Tomasz Ganicz, *Centre of Molecular and Macromolecular Studies, Polish Acad. of Sci. Lodz, Poland*
Shiquan Liu, *University of Jinan, Jinan, China*
Prof. Anatolii D. Pomogailo, *Institute of Problems of Chemical Physics, Russian Academy of Sciences, Russia*
Stoyko Fakirov, *University of Auckland, New Zealand*
H. C. Swart, *University of the Free State, Republic of South Africa*
Gehanne Abdel Samie Awad, *Ain shams University, Egypt*
Gamal A-H Mostafa, *King Saud University, Saudi Arabia*
S. J. Dhoble, *RTM Nagpur University, India*
Maamar Benkraouda, *United Arab Emirates University, United Arab Emirates*
Pang Suh Cem, *University Malaysia Sarawak, Malaysia*
Ashutosh Sharma, *Indian Institute of Technology Kanpur, India*
Dr. Atul Tiwari, *University of Hawaii, USA*
Avinash C. Pandey, *Bundelkhand University, India*
Dr. Yogendra K. Mishra, *Institute for Materials Science, CAU Kiel, Germany*
R. N. P. Choudhary, *Institute of Technical Education and Research SOA University, India*
Madeleine du Toit, *University of Pretoria, South Africa*
Klaus Mosbach, *Swiss Federal Institute of Technology, Switzerland/ Lund University, Sweden*
Burak Erman, *Koç University, Turkey*
Levent Demirel, *Koç University, Turkey*
Yusuf Menceloğlu, *Sabancı University, Turkey*



PEER REVIEWED BOOK

Advanced Materials

World Congress

September 16-19, 2013 | Çeşme Altın Yunus - İzmir, TURKEY

www.amwc2013.org

ISBN: 978-81-920068-3-16
eISBN: 978-81-920068-3-25
DOI: 10.5185/am13.ab-2013

IAAM International Association of Advanced Materials

İZMİR YÜKSEK TEKNOLOJİ ENSTİTÜSÜ
Türkiye'nin Teknoloji Rotası