Tayfun BEL

Adress: Istanbul Technical University Prof.Dr. Adnan Tekin Material Sciences and Production Technologies Applied Research Center 34469 Maslak, Istanbul, Turkiye
Skype : tayfun.bel, Tel : 0090 212 285 3096 #161 Office, Tel : 0090 212 285 3096 #155 Lab.
Fax:0090 212 285 7178, Cell:0090 533 922 0400, Web:http://web.itu.edu.tr/~bel/,
http://www.tayfunbel.com

OBJECTIVE

I have established many companies with my fellow researchers in many fields. My main motto is to "develop materials that you can use." I have successfully designed and produced Type-2 and type-3 prototype nanomaterials mainly for high altitude platforms and low earth orbit satellites. My aim is to develop novel materials for extreme environments such as low earth orbit, high altitude planes, and marine seabed.

PERSONAL PROFILE

I am a materials scientist and marketer. Currently, I am working on smart materials, self-healing materials, nanomaterials, aerospace materials, low earth orbit, high altitude platforms, radiation protection of aircrew and critical electronic equipment.

EDUCATION

Ph.D. in Materials science and metallurgical engineering at the Graduate School of Science And Technology, ITU. Have the Master of Science in Energy Science and Technology at Energy Institute, ITU. Bachelor's of Engineering from Istanbul Technical University. Bachelor's of Legal Studies from Anatolian University.

EMPLOYMENT

2015 – Present; Project researcher, Istanbul Technical University(ITU), Prof.Dr. Adnan Tekin Materials Science and Production Technologies Applied Research Centre(ATUM).
2013 – 2015; Young researcher, ITU, ATUM.
2008 – 2006; Iplikchi Tekstil, San. Tic. Ltd. Şti.
1999 – 2006; BELCOM, BELCO Filatura

PROFESSIONAL MEMBERSHIPS

ITUSAS – Diving club
ITU Taekwondo – Sports Club
Istanbul Tango – Dance school

SKILLS

I am an expert computer user. I do programming using C#, Fortran, Java and CUDA. I am a power user for many Ret Hat distros including Scientific Linux, Scientific Linux Fermi and LPS. I regularly use MS office and project. I hold certificates for CUDA programming and Cybersecurity for National Security. I have managed production lines up to 250 people and let many successful marketing teams up to 25 people. I hold certificates for Professional Leader

from Istanbul University. I hold online certificates including from many respected universities including Yale University and the University of Leiden.

FURTHER INFORMATION

I speak fluent English and beginner level French, German. I have Yellow – Blue belt at Taekwondo. I have a one-star diving license. I hold national Tango dancer license, and I am expert trap shooter.

REFEREES

Prof. Dr. Cüneyt Arslan – arslanc@itu.edu.tr
+90 212 285 3096 - Director of Istanbul Technical University(ITU), Prof.Dr. Adnan Tekin Materials Science and Production Technologies Applied Research Centre

Prof. Dr. Nilgün Baydoğan – dogannil@itu.edu.tr
+90 532 352 08 53 - Energy Institute – Istanbul Technical University

Prof. Dr. Hüseyin Çimenoğlu - cimenogluh@itu.edu.tr
+90 212 285 68 34 - Materials and Metallurgical Engineering department Istanbul Technical Univeristy

Prof. Dr. Orhan ŞEN – seno@itu.edu.tr
+90 532 351 47 44 - Istanbul Technical University

RESEARCH

My thesis subject and 1001 project funded by the government is; The Development of Technical Performance of Multi-Scale Self-Healing Nanocomposite Radiation Shielding Material for the use in Aerospace Applications. Living Polymer, Poly(methyl methacrylate) (PMMA) produced by the Atom Transfer Radical Polymerization ATRP is used at aerospace industry. These materials are light and durable and have a considerable potential for the High Altitude Aircraft (HAA) and Low Earth Orbit (LEO) satellites.

Durable MPSH nanocomposite against physical conditions will be produced by continuous evaluation of mechanical properties with tension, compression, impact and hardness tests. As such material will be subject to natural radiation environment at space and atmosphere during its service life with long-haul flights; the effect of the radiation environment on the MPSH nanocomposite will be evaluated. Also, natural radiation environments have the capacity to affect the physical properties of the material. On board, radiation sources can change the MPSH nanocomposite. I am doing research with the cooperation of Istanbul Technical University, Local service providers including national research centers, private companies, other universities and University Technology Petronas Malaysia. There are many papers prepared and published.

I am doing research with the cooperation of Istanbul Technical University, Local service providers including national research centers, private companies, other universities and University Technology Petronas Malaysia. There are many papers prepared and published. We have successful synthesized many nanocomposites and working day in and out characterizing them appropriately. I am willing to diversify end uses of my nanocomposites from aerospace to energy production and marine oil recovery.

TEACHING

I have given short lectures on radiation safety, mechanical properties of materials and nuclear engineering materials.

ADMINISTRATION

I have prepared one 1001 Tübitak project, one industrial scale Tübitak 1003 project in cooperation with BSH (Bosh Siemens) and many I Istanbul Technical University Scientific Research Coordination Centre grants. I have Excellent verbal and written skills which are highly developed by the legal studies I am currently attending.

CURRENT RESEARCH

The aim my current project is the development of light, durable, Multi-Phase Self-Healing (MPSH), polymer matrix, nanocomposite material and improvement of the material properties for desired applications. Usage of such materials at LEO satellite and HAA aircraft takes a lot of attention. During the production stage, I have to adapt and develop new manufacturing procedures to meet the demands of the industry. Currently, more than eight professors from different university advising me to take my research further. To characterizing the materials, I use TEM, ESEM, FTIR, XRD, XRF, NMR, Radiation transmittance, tension tests, compression tests, hardness tests, wear tests and computational modeling techniques. During this project, I have mastered many polymer synthesizing techniques including Atom Transfer Radical Polymerization, Emulsion polymerization, etc. I use GPU coding CUDA for developing models for the crack path and radiation shielding properties. I have to coordinate many research centers effort to accumulate tangible results. It takes tremendous managerial and people skills to run a team of 8 masters two bachelor's students simultaneously.

FUTURE RESEARCH INTERESTS

I am willing to certify my materials for the production of future quantum communication satellites and high altitude platforms which replace cellular communication and secure communications in the world.

QUALIFICATIONS

I have TOEFL iBT 93 and A1 French certificate and SD1 German certificate. I have certificates for CUDA programming and Cybersecurity for National Security. I have attendant Tübitak courses for Project Preparation and Management, Innovation, and Entrepreneurship, Leading and Management courses from various universities and have certificates.

PUBLICATIONS and PRESENTATIONS

- Energy systems and management ~ Chapter 18: Effect of curing time on poly(methacrylate) living polymer.
- International Journal of Mechanical and Production Engineering (IJMPE) ~ Effect of curing ambient on poly(methacrylate) living polymer.
- International Semiconductor Science & Technology Conference, Istanbul, 2014. ~ Production of pmma via living polymerizatıon with ATRP method

- International Conference on Fundamental and Applied Sciences, Kuala Lumpur, Malaysia, 2016 ~ The details on optical properties of polymethylmethacrylate for the Use in offshore oil and gas sectors

CONFERENCES and COURSES ATTENDED

- Project Preparation and Management course by Medeniyet University.
- Leading and Management course by Istanbul University
- Innovation, and Entrepreneurship course by Istanbul Technical University
- Entrepreneurship course and mentorship by Industry leaders administered by ITU Cekirdek.
- Legal courses from Yale University and Leiden University (online)
- International Semiconductor Science & Technology Conference, Istanbul.
- International Conference on Fundamental and Applied Sciences, Malaysia.
- The European Radiation Research Society annual meeting, Stockholm.

FUNDING and ACADEMIC AWARDS

- Scientific and Technological Research Council of Turkey rewarded my Ph.D. thesis with 1001 (biggest of its kind class academic) research project. The project title is " The Development of Mechanical Performance of Multi-Scale Self-Healing Nanocomposite Radiation Shielding Material for the use in Aerospace Applications."
- Personally rewarded by Scientific and Technological Research Council of Turkey.
- National Center for High-Performance Computing Center granted 100.000,00 CPU hours at GPGPU systems for the modeling mechanical behaviour of self-healing materials. Finding and optimizing the crack tip and path within the material.
- Istanbul Technical University Scientific Research Coordination Centre grants Tayfun BEL for the project of investigation of high energy beta particle permeability through metal pairs coupled with copper and nickel.

PROFESSIONAL MEMBERSHIPS

- Turkish Shooting and Hunting Federation
- Confédération Mondiale des Activités Subaquatiques
- Turkish Dance Federation