

# CURRICULUM VITAE (PROF.DR. S. TURAN)

## Personal Details

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Department: MATERIALS SCIENCE & ENGINEERING,

Interests: Microstructural Investigations, Lithium Ion Batteries, Thermoelectrics, Insulation Materials, Advanced Ceramics, Nanocomposites, Traditional Ceramics

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## Educational Status

Undergraduate: Istanbul Technical University, Dept. of Metallurgical Engineering, Turkey,  
01/07/1988

Graduate: Leeds University, School of Materials, Engineering Ceramics, Leeds, England,  
15/09/1990

Doctorate: Cambridge University, Dept. of Materials Science and Metallurgy, 01/03/1995

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## Administrative Tasks

- 1) Director, Research and Postgraduate Studies, 2019-
  - 2) Director, Advanced Technologies Research Centre, 2004 -2006; 2012-
  - 3) Head of Department, Department of Materials Science Engineering, 2007-2010 & 2013-2015
  - 4)- Head of Nanotechnology MSc and PhD Programme, 2007-2010 & 2013-2015
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## Doctorate Dissertations

- 1)"Microstructural characterisation of silicon nitride silicon carbide particulate composites"  
University of Cambridge, 1995
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## Articles Published in International Peer-Review Periodicals

- 1) "Comparison of xenon and gallium sources on the detection and mapping of lithium in Li-containing materials by using ToF-SIMS combined FIB-SEM" DERMENCI, K.B., TESAROVA, H., SAMORILT., TURAN S. Journal of Microscopy, 277, 42–48, 2020
- 2) "The effect of different GNPs addition on the electrical conductivities and percolation thresholds of the SiAlON matrix composites" BAŞKUT S., TURAN S., Journal of the European Ceramic Society, 40, 1159-1167, 2020
- 3) "Investigation of the chemical stability of Zn<sub>2</sub>SnO<sub>4</sub> in aqueous media by using ICP-OES and TEM analyses" Erden Sadiye, SAVACI U., ÖZEL EMEL, TURAN S., SUVACI ENDER , Materials Chemistry and Physics, 239, 122066, 2020
- 4) "The effect of limonite addition on the performance of Li<sub>7</sub>La<sub>3</sub>Zr<sub>2</sub>O<sub>12</sub>" DERMENCI K.B., Buluç A.F., TURAN S., Ceramics International, 45, 17, 21401 - 21408, 2019
- 5) "Investigation of phase selection hierarchy in Mn–Al alloys" Genç A.M., Acar Ö., Turan S. , Kalay İ., Savaci U., Kalay Y.E., Intermetallics, 115, -, 106617 -, 2019
- 6) "Unveiling the reaction products in heat treated Si<sub>3</sub>N<sub>4</sub>-Ti joined ceramics by transmission electron microscopy" TUNÇKAN O., YURDAKUL H., TURAN S., Journal of Advanced Ceramics, 8, 4, 500 - 508, 2019

- 7) "Inorganic CuFeO<sub>2</sub> Delafossite Nanoparticles as Effective Hole Transport Materials for Highly Efficient and Long-Term Stable Perovskite Solar Cells/title" AKIN S., Sadegh F., TURAN S., SÖNMEZOĞLU SAVAŞ, ACS Applied Materials Interfaces, 11, 48, 45142 - 45149, 2019"
- 8) "Inorganic CuFeO<sub>2</sub> Delafossite Nanoparticles as Effective Hole Transport Materials for Highly Efficient and Long-Term Stable Perovskite Solar Cells" Akın S., Sadegh F., Turan S., Sönmezoğlu S., ACS Applied Materials Interfaces, 11, 48, 45142 - 45149, 2019
- 9) "Processing of solid state sintered  $\alpha$ -SiC ceramics with carbon-black addition" ÇELİK A., KARA A., TURAN S., KARA F., Materials Research Express, 6, 10, 105606 -, 2019
- 10) "Nickel-substituted LiMnPO<sub>4</sub>/C olivine cathode material: Combustion synthesis, characterization and electrochemical performances" EL Khalfaouy Redouan, TURAN S., DERMENCİ K.B., SAVACI U., Addaou Abdellah, Laajeb Ali, Lahsini Ahmed, Ceramics International, 45, 14, 17688 - 17695, 2019
- 11) "Particulate Matter Emission Comparison of Piston-Engine Aircraft's Full-Rich and Best-Power Operations" TURGUT E.T., GAGA E.E., Açikel G., Çalışır D., ODABAŞI M., Artun G., Can E., İlhan S.Ö., BAŞKUT S., TURAN S., JOURNAL OF PROPULSION AND POWER, 35, 5, 1018 - 1028, 2019
- 12) "Preparation of N-doped graphene powders by cyclic voltammetry and a potential application of them: Anode materials of Li-ion batteries" GÜRSU H., Güner Y., DERMENCİ K.B., GENÇTEN M., Buluç A.F., SAVACI U., TURAN S., ŞAHİN Y., International Journal of Energy Research, 43, 10, 5346 - 5354, 2019
- 13) "Optimization and performance of nitrogen-doped carbon dots as a color conversion layer for white-LED applications" Güner Tuğrul, YÜCE Ç.H., Taşçioğlu D., Şimşek E., SAVACI U., GENÇ A., TURAN S., DEMİR M.M., Beilstein Journal of Nanotechnology, 10, 2004 - 2013, 2019
- 14) "Effect of heat treatment on the creep behavior of  $\alpha/\beta$  SiAlON sintered with multication oxide sintering additives" TURAN D., ULUDAĞ A., TURAN S., International Journal of Applied Ceramic Technology, 16, 1, 404 - 409, 2019
- 15) "Achieving high performance for aluminum stabilized Li<sub>7</sub>La<sub>3</sub>Zr<sub>2</sub>O<sub>12</sub> solid electrolytes for all solid-state Li-ion batteries: A thermodynamic point of view" Dermenci K.B., Turan S., INTERNATIONAL JOURNAL OF ENERGY RESEARCH, 43, 1, 141 - 149, 2019
- 16) "Mesoporous nanocrystalline ZnO microspheres by ethylene glycol mediated thermal decomposition" ALP EMRE, Araz Emre Can, Buluç A.F., Güner Y., Değer Y., EŞGİN H., DERMENCİ K.B., KAZMANLI M.K., TURAN S., GENÇ A., ADVANCED POWDER TECHNOLOGY, 29, 12, 3455 - 3461, 2018"
- 17) "Hydrothermally processed CuCrO<sub>2</sub> nanoparticles as an inorganic hole transporting material for low-cost perovskite solar cells with superior stability" AKIN S., Yuhang Liu, Dar M Ibrahim, Zakeeruddin Shaik M, Gratzel Michael, TURAN S., SÖNMEZOĞLU S., Journal of Materials Chemistry A, 6, 41, 20327 - 20337, 2018
- 18) "Investigation of Boro/Carbothermic and Carbothermic Reduction Synthesized Calcium Hexaborides" YILMAZ D., SAVACI U., KOÇ N., TURAN S., Journal of Boron, 3, -, 103 - 108, 2018
- 19) "Structural insights on understanding the cubic phase stabilization mechanism of sol-gel synthesized Li<sub>7-3x</sub>Al<sub>x</sub>La<sub>3</sub>Zr<sub>2</sub>O<sub>12</sub> (x = 0–0.4) – The effect of ZrOCl<sub>2</sub> and ZrO(NO<sub>3</sub>)<sub>2</sub>" DERMENCİ K.B., TURAN S., Ceramics International, 44, 10, 11852 - 11857, 2018
- 20) "Tailoring the properties of spark plasma sintered SiAlON containing graphene nanoplatelets by using different exfoliation and size reduction techniques: Anisotropic electrical properties" BAŞKUT S., ÇINAR A., SEYHAN A.T., TURAN S., Journal of the European Ceramic Society, 38, -, 3787 - 3792, 2018

- 21) "Tailoring the properties of spark plasma sintered SiAlON containing graphene nanoplatelets by using different exfoliation and size reduction techniques: Anisotropic mechanical and thermal properties" ÇINAR A., BAŞKUT S., SEYHAN A.T., TURAN S., Journal of the European Ceramic Society, 38, -, 1299 - 1310, 2018
- 22) "Polarized emission from CsPbBr<sub>3</sub> nanowire embedded-electrospun PU fibers" GÜNER T., TOPÇU G., SAVACI U., GENÇ A., TURAN S., SARI E., DEMİR M.M., Nanotechnology, 29, 13, 135202 -, 2018
- 23) "Processing of in-situ SiC reinforced AlN based composites" KALEMTAŞ A., ARSLAN G., KAYA P., TURAN S., KARA F., Journal of Ceramic Processing Research, 19, 2, 119 - 125, 2018
- 24) "Carbothermic reduction synthesis of calcium hexaboride using PVA-calciumhexaborate mixed gels" YILMAZ D., SAVACI U., KOÇ N., TURAN S., CERAMICS INTERNATIONAL, 44, 3, 2976 - 2981, 2018
- 25) "Creep and recovery behaviors of chemically induced grafted low density polyethylene films containing silanized hexagonal boron nitride nanosheets" SEYHAN A.T., TUNA A., DURUKAN O., GÖNCÜ Y., TURAN S., AY N., Materials Express, 8, 1, 55 - 67, 2018
- 26) "Effect of Cooling Cycle after Sintering on the Thermal Diffusivity of Y<sub>2</sub>O<sub>3</sub> Doped Si<sub>3</sub>N<sub>4</sub> Ceramics" UYAN P., TURAN S., UJMS, 6, 1, 39 - 47, 2018
- 27) "Processing of in-situ SiC reinforced AlN based composites" KALEMTAŞ AYŞE, ARSLAN G., KAYA P., TURAN S., KARA F., Journal Of Ceramic Processing Research, 19, 2, 119 - 125, 2018
- 28) "Hydrothermal synthesis of calcium hexaborate pentahydrate from local boric acid and its photoluminescence characteristic" KOÇ NURŞEN, YILMAZ DUYGU, TURAN S., Journal of the Australian Ceramic Society, 54, 2, 377 - 382, 2017
- 29) "Effect of SiC addition on the thermal diffusivity of SiAlON ceramics" KUSHAN AKIN SENİZ REYHAN, TURAN S., GENÇOĞLU PERVIN, MANDAL HASAN, Ceramics International, 43, 16, 13469 - 13474, 2017
- 30) "Effect of calcination on the production of sintered MgAl<sub>2</sub>O<sub>4</sub> by using different local waste Al<sub>2</sub>O<sub>3</sub>" ÇAKIR ASLI, TURAN S., Journal of the Australian Ceramic Society, 53, 2, 975 - 983, 2017
- 31) "Directional properties and microstructures of spark plasma sintered aluminum nitride containing graphene platelets" BAŞKUT S., ÇINAR ALPER, TURAN S., Journal of the European Ceramic Society, 37, 12, 3759 - 3772, 2017
- 32) "An alternative composite approach to tailor the thermoelectric performance in SiAlON and SiC" KAYA PINAR, GIULIANO GREGORI, YORDANOV PETAR, AYAS ERHAN, HABERMEIMER HANN S. ULRICH, MAIER JOACHIM, TURAN S., Journal of the European Ceramic Society, 37, 10, 3367 - 3373, 2017
- 33) "Wear behavior of solid SiAlON milling tools during high speed milling of Inconel 718" ÇELİK ALİ, ALAĞAÇ MELİKE, TURAN S., KARA A., KARA F., Wear, 378379, -, 58 - 67, 2017
- 34) "Influence of the growth conditions on the optical and structural properties of self-assembled InAs/GaAs quantum dots for low As/In ratio" ÖZDEMİR S., SUYOLCU Y. E., TURAN S., ASLAN B., Applied Surface Science, 392, -, 817 - 825, 2017
- 35) "Electron Microscopy Study on Hydrothermally Synthesized SnO<sub>2</sub>xZnO<sub>x</sub> Powders" KAYA PINAR, TURAN S., Microscopy and Microanalysis, 22, S3, 1272 - 1273, 2016
- 36) "EBSD Characterisation of SPSed CeB<sub>6</sub> Thermionic Electron Emitter" BAŞKUT S., KÖROĞLU LEVENT, AYAS ERHAN, TURAN S., Microscopy and Microanalysis, 22, S3, 1878 - 1879, 2016

- 37) "Electron Microscopy Study on the Effect of Si<sub>3</sub>N<sub>4</sub> addition to B<sub>4</sub>C SiC Al Composites" KAYA PINAR, KALEMTAŞ AYŞE, ARSLAN G., KARA F., TURAN S., *Microscopy and Microanalysis*, 22, S3, 1886 - 1887, 2016
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### **Published International Books and Book Parts**

- 1) Turan, S. ve Knowles, K.M. Bölüm adı: Wetting, non-wetting behaviour and crystallography of interphase boundaries in ceramic matrix composites. Kitap adı: Ceramic Matrix Composites: Microstructure/Properties Relationship, Woodhead publishing, 2005.



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## **Exhibitions**

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- 1) Photographic Exhibition, British Council, Ankara, 1998

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## **Scientific and Arts Organisation Memberships**

- 1) European Microscopy Society
- 2) Turkish Electron Microscopy Society
- 3) Materials Research Society
- 4) European Ceramic Society
- 5) Turkish Ceramic Society

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## **Previous Courses (Taught)**

- 1) Electron Optics
- 2) Crystallography and x-rays
- 3) Ceramography
- 4) Advanced Ceramics
- 5) Composite Materials
- 6) Structure of Materials
- 7) Nanotechnology

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## **Current Courses**

- 1) Materials Characterisation Techniques
- 2) Scanning Electron Microscopy and Microanalysis
- 3) Nanoimaging and Nanochemistry
- 4) Transmission Electron Microscopy and Analysis

Dear Prof. Zweck, President of EMS Dear Prof. Serin, Secretary General of EMS,

As Turkish Society for Electron Microscopy, we would like to nominate Prof. Dr.Servet Turan, Vice President of Turkish Society for Electron Microscopy for the selection process as an executive board member.

Prof. Turan has been working on the electron microscopy characterisation of materials since 1989 starting with his MSc thesis and then heavily involved with microscopy with his PhD thesis at Cambridge University. During his PhD work he won micrograph competitions twice (once best micrograph and the other one as second best micrograph) organised by Royal Microscopical Society. Since then, he has published more than 100 (125) paper on SCI type journals and all of them have small or big portion of work related to the microscopy. He supervised around 50 PhD and MSc thesis on materials science area and all of them have microscopy aspect and at least 5 of the thesis were completely based on the use of new/advanced microscopy techniques.

He also established electron microscopy facilities at Eskisehir Technical University at the beginning of 2000 and the user facility has been widely used by universities and industry.

He organised several microscopy schools at national and international levels and is still teaching microscopy at his university as well as companies who are either having a microscope or using the facilities to solve their problems. He also organized microscopy events (with a desktop microscope) for primary and secondary school students as well as for the public at shopping malls to increase the visibility of microscopes.

He has been attending all the national congresses organised by Turkish Electron Microscopy Society since 1995 and he has been the executive board member of Turkish Electron Microscopy Society since 2008. He was the organizer and organisation committee members of several International and National microscopy congresses. He has been serving very efficiently and perfectly for the Turkish Society for Electron microscopy so far.

We think that Prof. Turan would be helpful to the brighter future of European Microscopy Society as an executive board member.

I would like to express my sincere thanks for your consideration.

With my best regards,

Prof.Dr.Serap Arbak-President of Turkish Society for Electron Microscopy