Brief biographical note

Prof. Dr. Ali Arslan KAYA is Full Professor of Metallurgy and Materials Engineering, and Head and founder of the Metallurgy and Materials Engineering Department of Mugla University (Mugla, Turkey). He graduated in Metallurgical Engineering in 1984 at Istanbul Technical University and obtained his PhD in Materials Science in 1993 at the University of Oxford.
Prof. Kaya has been invited as lecturer in several International Conferences and received several awards. He is a recognized expert in electron microscopy, magnesium alloys and steels.

His professional and scientific activity comprises: book chapters (2); papers published in scientific journals in the ISI ranking (26); papers published in the proceedings of national conferences (6); papers published in the proceedings of international conferences (53); patents of invention (2); heading of in different international or national research projects (15), direction of master degrees (7); direction of PhD (1); invited lectures at international conferences (2).

Name, salutation: Professor Ali Arslan Kaya
Current appointment:
Head of Metallurgy and Materials Engineering,
Advisor to the Rector,
Manager of Research Laboratories Center,
Scientific Research Project Coordinator
Mugla University, Mugla (Turkey)

Educational Background:

- Graduated in Metallurgical Engineering, Istanbul Technical University (Turkey), 1984.
- MSc in Materials Science, Istanbul Technical University (Turkey), 1986.
- MSc in UMIST, Manchester (England) (Lectures attended for one academic year), (on a full scholarship from The Turkish Ministry of Education), 1988.
- PhD in Materials Science, University of Oxford (England), (on a full scholarship from The Turkish Ministry of Education), 1993.

Experience:

- Professor, Head of Metallurgy and Materials Eng. Dept., Mugla University, Engineering Faculty, Mugla, Turkey (since 2008 June).
- Advisor to the Rector, Coordinator of Scientific Research Projects (Office of 10), and Manager of Research Laboratories Center, Mugla University, Mugla, Turkey (since 2008 June).
- Scientific Research Project Coordinator, Mugla University, Mugla, Turkey (since 2009).
- Part-time lecturer, Anadolu University, Engineering Faculty, Materials Eng.Dept., Eskişehir (since 2006).

- Manager of Electron Microscopy Unit and Head of Metals Technologies Research Group (Group of 15), TUBITAK-MRC, Materials and Chemical Technologies Research Institute, Gebze, Kocaeli.
- Research Advisor, Istanbul Technical University, Prof. Dr. Adnan Tekin Research Center, Istanbul. (part-time position)
- Postdoctoral Fellow, Materials Sci. & Eng. Department, Ben-Gurion University, Israel.
- Postdoctoral Fellow, University of New South Wales, Sydney Australia.
- Lecturer, Marmara University, Technical Education Faculty, Istanbul, Turkey.
- Researche Advisor, TUBITAK-MRC (Scientific and Technological Research Council of Turkey – Marmara Research Center), Materials and Chemical Technologies Institute, Gebze, Turkey.
- Engineer, Nonferrous Continuous Casting, Koresmetal, K.Cekmece, Istanbul, Turkey.
- Received training and qualified to be on the 'Board of Governors' of General Electric Aircraft Engines, USA, for coated parts of aircraft engines. The Board consists of 5 people, two independent global referees and three members from GEAE Cincinnati Plant, USA. Based on this qualification A.A. KAYA gave certificate courses to international suppliers of GEAE from different countries for 5 years.
- Training at GE Aircraft Engines, Evendale Plant, Cincinnati-USA (October-December 2000).
- Received a certificate (attending a week-long course by lectures and examinations) on the evaluation of Aircraft Engines Thermal Coatings. Central Coatings Laboratories, Metcut Co., Cincinnati, OH, USA.
- Visiting Scholar, Electron Microscopy studies on high temperature alloys at Oxford University, Department of Materials, England (3 months, Summer 2000).
- Visiting Scholar, University of Sydney, Electron Microscopy Unit (1997-98).
- Visiting Fellow, Electron Microscopy studies at Arizona State University, Department of Manufacturing & Industrial Technology, Tempe-Arizona, USA, June-August, 1995.
- Reviewed manuscripts for the following international journals (2005-to present):
  - Journal of Biomedical Materials Research: Part A,
  - Materials Science & Engineering A,
  - Journal of Materials Science
  - Journal of Materials Processing Technology
  - Journal of Materials Chemistry and Physics
- Invited participant: Major Metals Industries Special Expertease Committee (Ana Metal Sanayii Özel İhtisas Komisyonu) towards preparation of the 9th Development Plan by State Planning Department of Turkey (DPT) (2007-2013).
- Invited participant: Committees to evaluate research projects to be funded by the Turkish state agencies, TUBITAK, and TEYDEP industrial projects.
- Best Paper of 2009 Award, The Minerals, Metals and Materials Society - TMS) Light Metals. (Awarded Paper: Ozgur Duygulu, Selda Ucuncuoglu, Gizem Oktay, Deniz Sultan Temur, Onuralp Yucel and Ali Arslan Kaya, Development of 1500mm Wide Wrought Magnesium Alloys By Twin Roll Casting Technique in Turkey, Magnesium Technology 2009, Edited by Eric A. Nyberg, Sean R. Agnew, Neale R. Neelameggham and Mihriban O. Pekguleryuz, TMS (The Minerals, Metals & Materials Society), 2009.)
- Dr. Akın Çakmakçı Award 2010, TTGV (Technology Development Foundation of Turkey), Industrially Applicable Research Project, 'Production of Magnesium Sheet

via Twin-Roll Casting'.

- First Prize, 'Neurosurgery Association National Congress November 2007. Best Research Paper of 2007. (Awarded paper: R.A. Kaya, H. Çavuşoğlu, C. Tanık, A. A. Kaya, Ö. Duygulu, Z. Mutlu, E. Zengin, Y. Aydın, 'The Effects of Magnesium Particles on Posterolateral Spinal Fusion: An Experimental in Vivo Study in a Sheep Model', J. Neurosurgery Spine 6:141–149, 2007.)
- Second Prize, 'Turkish Neurosurgery Foundation national Congress', April 2007. (Awarded paper: R.A. Kaya, H. Çavuşoğlu, C. Tanık, A. A. Kaya, Ö. Duygulu, Z. Mutlu, E. Zengin, Y. Aydın, 'The Effects of Magnesium Particles on Posterolateral Spinal Fusion: An Experimental in Vivo Study in a Sheep Model', J. Neurosurgery Spine 6:141–149 (2007).
- TUBITAK Marmara Research Center 2008 Project Success Prize Project Name: 'Development of Magnesium alloys, and production of parts for Automotive, Electronic and defence Industries'. Funded by State Planning Department of Turkey (DPT).
- TUBITAK Marmara Research Center 2005 Project Success Prize 'Generation of Synthetic Defects and Their Incorporation into Super Alloy and Titanium Bodies' project funded by General Electric Aviation, USA.
- TUBITAK Marmara Research Center 2005 Project Encouragement Prize 'Development of a production technique for Tin targets (Sn-Cu Bimetals) used in production of coated glass' project funded by SISECAM A.S. Turkey.
- TUBITAK Marmara Research Center 2003 Project Encouragement Prize 'General Electric Aircraft Engines- Microcharacterization and Modelling Studies' project funded by GE Aviation, USA.
- First Prize, Prof. Dr. Türkan Erbengi Research Award, 19th Electron Microscopy Congress (with international participation), Karadeniz Technical University, 22-25 June 2009, Trabzon. Awarded Paper: "The Influence of Nitridation Time on the Structural Properties of GaN Grown on Si (111) Substrate'' Engin Arslan, Mustafa K. Ozturk, Ozgür Duygulu, Ali Arslan Kaya, Suleyman Ozcelik, Ekmel Ozbay, Appl Phys A 94: 73–82, 2009.

Research/clinical interest

Research activity in the fields of:

- Magnesium Technologies
- Electron Microscopy (SEM, TEM) and Crystallography
- Biological Materials
- Super Alloys and Titanium
- Welding
- Corrosion and oxidation of alloys
- Semiconductors

Present Areas of Research

The ongoing research work is characterized by the following keywords: Biomaterials, processing and characterisation of magnesium and its alloys, interfaces, microalloyed steels.

Title of your BIOMMEDD 2010 lecture:

Permanent Implants with Magnesium Surface