

# **Ahmed M. H. Abdulkadhim Al-Ghaban**

## **Assistant Professor**

Materials Engineering Department  
University of Technology  
Baghdad Iraq  
Tel: +964 77 1388 1945  
P. O. BOX 25010 Baghdad  
E-mail:ahmed\_gaban@daad-alumni.de  
[a.ghabban@gmail.com](mailto:a.ghabban@gmail.com)

### **EDUCATIONAL BACKGROUND**

1. Ph.D. in Materials Science and Engineering, Faculty of Georesources and Materials Engineering, Division of Materials Science and Engineering, Materials Chemistry (MCh), RWTH Aachen University, Aachen, Germany, March 2011, Area of Specialization: Thin solid films, MAX phases, Phase stability.
2. M.Sc. in Materials Science and Engineering, Metal section, Production Engineering and Metallurgy Department, University of Technology, Baghdad, Iraq, 2000, Area of Specialization: Coatings and Corrosion Prevention, Sherardizing, Diffusion.
3. B.Sc. in Materials Science and Engineering, Metal section, Production Engineering and Metallurgy department, University of Technology, Baghdad, Iraq, 1996/1997, Area of Specialization: Metals.

### **WORK EXPERIENCE**

1. Head of Materials Engineering Department UOT Baghdad since 01.02.2017.
2. Editorial Manager of Engineering and Technology Journal UOT Baghdad since 2016- Present.
3. Head of Ceramics and Building Materials Engineering Branch, Materials Engineering Department UOT Baghdad Sep. 2014- Present.
4. The manager of Labs section, Materials Engineering Department UOT Baghdad Dec 2011- Sep 2014.
5. Assistant Professor of Materials Science and Engineering, Materials Engineering Department UOT Baghdad Jul 2012- Present.

6. Lecturer of Materials Science and Engineering, Materials Engineering Department UOT Baghdad Oct 2004- Jul 2012.
7. Assistant lecturer of Materials Science and Engineering, Materials Engineering Department UOT Baghdad Apr 2001- Oct 2004.
8. Director of Registration Office at Materials Engineering Department UOT Baghdad 2001-2005.
9. Laboratories staff group leader at Materials engineering department UOT Baghdad 2003-2005.
10. The Director of the Main Registration Office at UOT, Baghdad 2005-2006.
11. Member in the department council, Materials engineering department, UOT Baghdad, several semesters from 2003- Present.
12. Member in Iraqi Engineers Union since 1997.

## **AWARDS and HONORS**

- Scholarship holder for (Re-invitation Program for Former Scholarship Holders) sponsored by DAAD (German Academic Exchange Service) for researchers, MCh, RWTH Aachen University, Germany, 1<sup>st</sup> Jul 2014-1<sup>st</sup> Oct 2014.
- Scholarship holder for (PhD Study) sponsored by DAAD (German Academic Exchange Service) MCh, RWTH Aachen University, Germany, 2006-2010.
- Short term scholarship holder for (Training course on materials science and engineering) sponsored by DAAD (German Academic Exchange Service) and UNISCO, RWTH Aachen University, Germany, May 2005 Jul 2005.
- Participant in THERMEC 2009 international conference, (Area: MAX phase thin films) Berlin, Germany, August 25-29 2009.
- Participant in MSE 2010 Materials Science and Engineering international conference, (Area: MAX phase formation by Intercalation) Darmstadt, Germany, August 24-26 2010.
- Participant in many symposiums, seminars, presentations, lectures, and courses during the period of doctorate study in Germany 2006-2011.
- Participant in many symposiums, seminars, courses, and local conferences from 2001-2006 and from 2011-Present.

- Chairman or member of many scientific and administrative committees working in the Department of Materials Engineering or University of Technology and/or the Ministry of Higher Education and Scientific Research, Baghdad, 2001-2006 and from 2011-Present.
- Associate Member or Chairman in several advisory teams to solve problems in the industrial area of specialization at the level of home country, 2001-2006 and from 2011-Present.
- A recipient of numerous letters of appreciation and praise as well as many honors and awards and a candidate to win many awards at the local level, 2001-2006 and from 2011-Present.

## RESEARCH EXPERIENCE

1. Doctoral Research: *On the stability of MAX phase thin films.*
2. Master in Science and Engineering (Ranked the first on the graduates): *Coating of low carbon steel using zinc (Sherardizing method) and its behavior during oxidation.*

### 3. Supervisor:

#### ➤ Recent M.Sc. Thesis

- Investigation of solid state reaction in the ternary Ti-Al-C, V-Al-C, and Cr-Al-C systems.
- Investigation of corrosion resistance of  $V_2AlC$  and  $Cr_2AlC$  ternary carbides in different media.
- Attempt to produce the MAX phases from new elements by powder technique.
- The effect of Al concentration on the phase evolution of ternary ceramic of (Ti-Al-C) system.
- Estimation and corrosion control by nano particles coating.
- Properties investigation of polyethylene therephthalate (PET) chemical recycled/bottles waste.

#### ➤ Recent Ph. D. Thesis

- Synthesis and characterization of polymer Nano composite materials for advanced structural applications.
- Studying the effect of nanoparticles on mechanical behavior of some carbide.

➤ **Some Recent evaluated Researches**

- Fabrication of anti-weather surface (super hydrophobic surface) by powder coating technique.
- Preparation and characterization of carbon nanotubes for advanced applications.
- Preparation and characterization of rare earth doped luminescent compound.
- Biomedical materials based on electrospun polymeric fiber.
- Optimization of the factors affecting the production of nanosilica from Iraqi sand and its industrial application
- N study the electrical properties of porous silicon prepared by electrochemical etching technique.
- Preparation and study of spectral analyses and optical properties of nano-composite thin films for photo electrochemical hydrogen production.
- Preparation and characterization of biomedical Co-base shape memory alloys.

## **RESEARCH INTERESTS**

- Surface and Coating Technology
- MAX Phases
- Ceramics
- Nanomaterials
- Thin Solid Films
- Combinatorial Magnetron Sputtering
- Thermal Stability
- Physical Metallurgy
- Self-healing Materials

## **TEACHING EXPERIENCE**

1. Lecturer for undergraduate students: Materials Science and Engineering Department, University of Technology, Baghdad, Iraq for:

- Surface Engineering
- Phase Transformations and Heat Treatments
- Corrosion and Surface Protection
- Advanced Materials
- Mechanics of Materials
- Statics and Dynamics

2. Lecturer for postgraduate students: Materials Science and Engineering Department, University of Technology, Baghdad, Iraq for:

- Advanced Ceramics Materials (for students from the Faculty of Dentistry)
- Surface Engineering

## LANGUAGE ABILITY

Arabic: Mother tongue.

English: very good in verbal and written communication as well as reading and conversation skills.

German: intermediate level skill in verbal and written communication.

French: some basics of conversation.

## SOME PUBLICATIONS (English)

### ➤ Journal Papers (English):

1. **Ahmed Abdulkadhim**, Tetsuya Takahashi, Denis Music, Frans Munnik, Jochen M. Schneider, **MAX phase formation by intercalation upon annealing of  $\text{TiC}_x/\text{Al}$  ( $0.4 \leq x \leq 1$ ) bilayer thin films**, Acta Materialia 59 (2011) 6168–6175.
2. **Ahmed Abdulkadhim**, Moritz to Baben, Tetsuya Takahashi, Volker Schnabel, Marcus Hans, Conrad Polzer, Peter Polcik, Jochen M. Schneider, **Crystallization kinetics of amorphous  $\text{Cr}_2\text{AlC}$  thin films**, Surface & Coatings Technology 206 (2011) 599–603.
3. **Ahmed Abdulkadhim**, Moritz to Baben, Volker Schnabel, Marcus Hans, Niklas Thieme, Conrad Polzer, Peter Polcik, Jochen M. Schneider, **Crystallization kinetics of  $\text{V}_2\text{AlC}$** , Thin Solid Films 520 (2012) 1930–1933.
4. Tetsuya Takahashi, **Ahmed Abdulkadhim**, Denis Music, Jochen M Schneider, **Spontaneous formation of In-whiskers on  $\text{YIn}_3$  thin films deposited by combinatorial magnetron sputtering**, IEEE TRANSACTIONS ON NANOTECHNOLOGY 10 (5) (2011) 1202-1208

## Some Releases

[http://www.muw.rwth-aachen.de/cms/Materialwissenschaft\\_und\\_Werkstofftechnik/Forschung/institute/~bulv/MCh/lidx/1/](http://www.muw.rwth-aachen.de/cms/Materialwissenschaft_und_Werkstofftechnik/Forschung/institute/~bulv/MCh/lidx/1/)

<http://d-nb.info/1018219242/34>