Dr. Mehdi Divandari

Associate Professor, Materials Engineering School,
Iran University of Science and Technology,
Narmak, Tehran, Iran
Post Code: 16846-13114

Tel.: +98-21-77459151
Cell: +98-912-3905813
E-mail: divandari@iust.ac.ir
Fax: +98-21-77459151

PERSONAL DETAILS

Full Name: Mehdi Divandari
Date of Birth: 31. May, 1959
Nationality: Iranian
Language: Persian, English
Other Details: Married, Two Children

ACADEMIC and TEACHING EXPERIENCES

2008-2012	**Faculty Member (Associate Prof.)** Advanced Casting, Engineering Design in Casting, Casting Defects, Porous Materials
2001-2008	**Faculty Member (Assistant Prof.)** Lecturer of, Casting, Casting Lab. Solidification Lab. Mold Design, Advanced Casting, Engineering Design in Casting, Materials Science
2001-2006	**Group Manager (Industrial Metallurgy)** Materials Engineering School, Iran University of Science and Technology, Tehran, IRAN
1996-2000	**Casting Research Group** Birmingham University, Birmingham
1989 – 1996	**Faculty Member and Instructor** Materials Engineering School

WORK AND RESEARCH EXPERIENCES

Academic Position: Scientific Member**,** (Iran University of Science and Technology)
Years of Employment in University: 23 Years

Other Experience:
1- Head of Industry/University Cooperation Office
2- Executive Member of the Board of Iranian Foundrymens Society (2007-2012)
3- Editor/Associate Editor and Member of Scientific Board of Journals:
3-1-Iran Journal of Foundry (Rikhtegary), In Persian (2000-2012)
3-2-Iran Journal of Foundry Industry, (In Persian), (1995-2012)
3-3-Aluminium, (In Persian), (2000-2012)
4- Executive Member of the Board of Alda Company, Aluminum Casting, 1995-2010
5- Executive Member of the Board of Tamammavad Company (2003-2006)
6- Member of Industrial Clinic of Tehran University (2009-Present)

EDUCATION

1996-1999	**PhD. in Materials Science and Engineering** Birmingham University, Birmingham, UK Thesis: Mechanism of Bubble Damage in Castings Supervisor: Prof. John Campbell
1985-1988	**M. Sc. in Materials Science and Engineering** Iran University of Science and Technology (IUST), Tehran, Iran Thesis: An Investigation on Production and Properties of Al Alloyed Cast Iron (20-25 Weight Percent Al) Supervisor: Prof. Y. K. Kharrazi
1979-1985	**B. Sc. in Materials Science and Engineering** Iran University of Science and Technology (IUST), Tehran, Iran

PUBLICATIONS

- **Books:**

- **M. Divandari**, A. R. Vahid Golpayegani, H. R. Shahverdi, 2006, "Metal Foams", Iran University of Science and Technology Publication, Reprint 2011, (In Persian).

- **M. Divandari**, M. Shahedi Asl, R. Khadem Hosseni, (2011)"Polyethylene Welding", Fakhrab Company. (In Persian).

- **International Journal Papers:**
- **مقالات چاپ شده در مجلات علمی - لاتین**

1. E. Hajjari, **M. Divandari**, S.H. Razavi, T. Homma, S. Kamado, (2012), “Microstructure characteristics and mechanical properties of Al 413/Mg joint in compound casting process”, Metallurgical and Materials Transactions A, Volume 43, Issue 12, pp 4667-4677.

2. Emami, S. M.; **Divandari, M**.; Hajjari, E., Arabi, H.; (2012),"Effect of melt to solid insert volume ratio on Mg/Al dissimilar metals bonding" International Journal of Cast Metals Research, DOI: 10.1179/1743133612Y.0000000037.

3. Azarmehr, S. A.; **Divandari, M**.; Arabi, H. (2012), "An investigation on the thickness of short time oxide films in Al-1Mg and Al-2Mg alloys" Materials Science and Technology, 28 (11), 1295-1300.

4. Zare G. R.; Divandari M.; Arabi H. (2012), "Investigation on interface of Al/Cu couples in compound casting" "Materials Science and Technology, **DOI:**http://dx.doi.org/10.1179/1743284712Y.0000000096

5. Nayebi, B**,** Divandari, M. (2012) "Characteristics of dynamically formed oxide films on molten aluminium", International Journal of Cast Metals Research 25 (No. 5), 270-276

6. Emami, S. M.; **Divandari, M**.; Arabi, H.; Hajjari, E. (2012),"Effect of melt to solid insert volume ratio on Mg/Al dissimilar metals bonding" Journal of Materials Engineering and Performance (DOI: 10.1007/s11665-012-0243-y).

7. A. R. Mirak, **M. Divandari**, S. M. A. Boutorabi and J. A. Taylor (2012),"Effect of oxide film defects generated during mould filling on mechanical strength and reliability of magnesium alloy castings (AZ91)", International Journal of Cast Metals Research, Volume 25, Number 3, June 2012 , pp. 188-194(7)

8. Ali Rasooli, **M. Divandari**, Hamid Reza Shahverdi, and Mohammad Ali Boutorabi (2012) " Kinetics and mechanism of titanium hydride powder and aluminum melt reaction " International Journal of Minerals, Metallurgy and Materials, Vol. 19, No. 2, P-165

9. H. Sharifi, A.R. Khavandi, **M. Divandari**, and M.I. Hasbullah (2012) " Effect of magnesium and nickel coatings on the wetting behavior of alumina toughened zirconia by molten Al-Mg " International Journal of Minerals, Metallurgy and Materials, Vol.19, No. 1, P- 77.

10. E. Hajjari, **M. Divandari**, S.H. Razavi, T. Homma, S. Kamado, (2012), "Intermetallic compounds and antiphase domains in Al/Mg compound casting" *Intermetallics*, Volume 23, April 2012, Pages 182–186

11. E. Hajjari, **M. Divandari**, S.H. Razavi, S.M. Emami, S. Kamado, (2011), "Estimation of the transient interfacial heat flux between substrate/melt at the initiation of magnesium solidification on aluminum substrates using the lumped capacitance method", Applied Surface Science, Vol. 257, Issue 11, pp 5077-5082.

12. E. Hajjari, **M. Divandari**, S.H. Razavi, S.M. Emami, T. Homma, S. Kamado, (2011), " Dissimilar joining of Al/Mg light metals by compound casting process ", J. of Materials Science, Vol. 46, Issue 11, pp 6491-6499.

13. Hajjari, E., **Divandari, M.**, Arabi, H., (2011), "Effect of applied pressure and nickel coating on microstructural development in continuous carbon fiber-reinforced aluminum composites fabricated by squeeze casting" Materials and Manufacturing Processes 26 (4) pp. 599-603

14. E. Hajjari , **M. Divandari** , A.R. Mirhabibi, (2010), "The effect of applied pressure on fracture surface and tensile properties of nickel coated continuous carbon fiber reinforced aluminum composites fabricated by squeeze casting", Materials and Design, Vol., 31, Issue 5, pp, 2381–2386.

15. H. Sharifi, **M. Divandari**, A. Khavandi, and M.H. Idris, (2010) " Effect of Al powder and silica sol on the structure and mechanical properties of Al2O3-ZrO2 foams" Acta Metallurgica Sinica (English Letters), 23 (4), pp. 241-247

16. **Divandari, M.**, Jamali, V., Shabestari, S.G. (2010) " Effect of strips size and coating thickness on fluidity of A356 aluminum alloy in lost foam casting process", International Journal of Cast Metals Research, 23 (1), pp. 23-29

17. **M. Divandari,** Vahid Golpayegani A.R., (2009) "Study of Al/Cu Rich Phases Formed in A356 Alloy by Inserting Cu Wire in Pattern in LFC Process", Materials and Design, Vol. 30, pp. 3279–3285

18. M. Mehdi Hejazi, **M. Divandari**, E. Taghaddos, (2009) "Effect of Copper Insert on the Microstructure of Gray Iron Produced Via Lost Foam Casting", Materials and Design, Vol. 30, pp, 1085–1092.

19. E. Hajjari, **M. Divandari,** (2008) "An Investigation on the Microstructure and Tensile Properties of Direct Squeeze Cast and Gravity Die Cast 2024 Wrought Al Alloy", Materials and Design, Vol. 29, pp. 1685–1689.

20. **M. Divandari**, Arabi H., M., Ghasemi Minaeei S. (2008) “Thermal Fatigue Resistances of 356 and 413 Cast A1 Alloys” Iranian Journal of Materials Science and Engineering, Vol. 5, No.3, pp1-6.

21. A. R. Mirak , **M. Divandari** , S. M. A. Boutorabi , J. Campbell, (2007) “Oxide Film Characteristics of AZ91 Magnesium Alloy in Casting Conditions” International

Journal of Cast Metals Research, Vol. 20, No.4, pp, 215-220.

22. Arabi H., **M. Divandari** M., Hosseini A. H. M., (2006) "The Effect of Ti Contents on the Amounts of Inclusions Formation and Mechanical Properties of C300 High Strength Steel" Iranian Journal of Materials Science and Engineering, Vol. 3, No.3-4, pp 6-12.

23. **M. Divandari**, J. Campbell, (2005) "Morphology of Oxide Films of Al-5Mg Alloy in Dynamic Conditions in Casting " International Journal of Cast Metals Research, Vol. 18, No.3.

24. 3 - Y.H.K. Kharrazi , **M, Divandari**., S, Saghi., (2005) " Mold Filling Behavior of Double Gating System in Aluminum LFC Process" Iranian Journal of Materials Science and Engineering, Vol. 2, No.1, pp 25-32.

25. Hajjari E., **Divandari M**., Mirhabibi A.R., (2004) "The Study of Electrolysis Coating of Nickel of Carbon Fibers " Iranian Journal of Materials Science and engineering , Vol.1, No.1, pp 43-48.

26. **M. Divandari**, J. Campbell, (2004) " Oxide Film Characteristics of Al-7Si-Mg Alloy in Dynamic Conditions in Casting" International Journals of Cast Metal Research , Vol. 17, No. 3.

27. Saghi S., **Divandari M**., Kharrazi Y.H.K., (2004) "Flow Behavior of Molten Metal in Aluminum LFC Process" Iranian Journal of Materials Science and Engineering, Vol.1, No. 2. pp 31-38.

28. **M. Divandari**, J. Campbell, (2000) "A New Technique for the Study of Aluminum Oxide Films" Aluminum Transactions, an International Journal, Vol. 2, No. 2, pp 233-238.

- **International Conference Papers:**

1. H.R. Pakzaman, A.R. Khavandi, **M. Divandari**, (2012), A study on aluminum matrix composite reinforced with a two-dimensional network of interconnected steel wires fabricated by lost foam casting, New and Advanced Material International Congress, Islamic Azad University, Majlesi Branch, May 30-31, 2012, Azad University, Majlesi Branch, May 30-31.

2. Bagha, P. Sotudeh; **Divandari, M**.; Razavi, S. H. (2012) "Effects of ARB cycles and holding temperature on density of aluminum foam" Proceedings of Iran International Aluminum Conference (IIAC2012).

3. Mohammad Khanbeiki; **Mahdi Divandari**; Morteza Tamizifar; Masoud Hassankhani; "Fading of inoculant particles in 8011 aluminum melt in a Twin Roll

Casting" Proceedings of Iran International Aluminum Conference (IIAC2012).

4. Hemmati, M.; **Divandari, M**., (2012) "The effects of oxide film characteristics on the bubble damage defect in Al5Mg and Al7SiMg alloys" Proceedings of Iran International Aluminum Conference (IIAC2012).

5. H.R. Pakzaman, **M. Divandari**, A.R. Khavandi , (2012), Effect of nickel coating on steel wire reinforcement on mechanical properties of aluminum matrix composites produced via lost foam casting, " Proceedings of Iran International Aluminum Conference (IIAC2012).

6. Z. Nouri., M. Divandari, A. Kavandi, (2012), The influence of nickel coating thickness on interlayer morphology of steel wires in A413 matrix composite via lost foam casting, The International Conference on Experimental Solid Mechanics and Dynamics (X-Mech-2012), Iran University of Science & Technology,March 6-7, 2012, Tehran, Iran

7. **M. Divandari**., J. Campbell., (2003) "Bubble Damage in a Zn-Al Alloy Pressure Die Casting "AFS Transactions, Vol. xx , pp. 243-270, Des Plaines IL USA.

8. **M. Divandari**., J. Campbell., (2001) "Mechanisms of Bubble Trail Formation in Castings", AFS Transaction, April-May 2001, Vol. xx, pp-xxxx

9. **M. Divandari**., J. Campbell., (1999) "The Mechanism of Bubble Damage in Castings " 1st International Conference on Gating , Filling and Feeding of aluminum castings , Oct. 11-13., Opryland Hotel , Nashville TN, pp. 49-63.

Persian Scientific Journal Papers (English Abstract):

مقالات چاپ شده در مجلات علمی – فارسی

1. RASOLI ALI, **DIVANDARI MEHDI**, SHAHVERDI HAMID REZA, BOUTORABI S. MOHAMAD ALI (2010) "STUDY OF THE INTERFACE REACTIONS BETWEEN TITANIUM HYDRIDE POWDER (TIH2) AND PURE ALUMINUM MELT", JOURNAL OF METALLURGICAL AND MATERIALS ENGINEERING (JOURNAL OF SCHOOL OF ENGINEERING; 22(1):1-10.

2. ARGHIANI M., AZADBEH M., **DIVANDARI M**., ZARGHAMI M (2010) "STUDY OF INTERMETALLIC COMPONENTS IN AL WIRE INTERFACE INSERTED IN GRAY CAST IRON MICROSTRUCTURE PRODUCED VIA LOST FOAM CASTING", MAJLESI JOURNAL OF MATERIALS ENGINEERING SUMMER 2010; 4(2 (13)):27-35.

3. RASOLI ALI, **DIVANDARI MEHDI**, SHAHVERDI HAMID REZA, BOUTORABI S. MOHAMAD ALI (2009) "EFFECT OF AMBIENT ATMOSPHERE AND THE RATE OF

HEATING ON THE BEHAVIOR OF THERMAL DECOMPOSITION TITANIUM HYDRIDE (TIH2) POWDER", JOURNAL OF METALLURGICAL AND MATERIALS ENGINEERING (JOURNAL OF SCHOOL OF ENGINEERING), 21(1):0-0.

4. RASOLI ALI, SHAHVERDI HAMID REZA, **DIVANDARI MEHDI,** BOUTORABI S. MOHAMAD ALI (FALL 2008) "STUDY OF THERMAL DECOMPOSITION KINETIC OF TITANIUM HYDRIDE POWDER (TIH_2) AT HIGH TEMPERATURES ", JOURNAL OF TECHNICAL- ENGINEERING ; 2(1):1-12.

5. SHOJAEI E., **DIVANDARI M**, BOUTORABI S.M.A. (2008) "EFFECT OF AUSTEMPERING HEAT TREATMENT ON STRENGTH PROPERTIES AND HARDNESS OF ALUMINUM GREY CAST IRON", JOURNAL OF FACULTY OF ENGINEERING (UNIVERSITY OF TEHRAN, 41(8 (110)):1043-1052.

6. MIRAK A.R., **DIVANDARI M**., BOUTORABI S.M.A. (MARCH 2008) "STUDY OF MORPHOLOGY OF OXIDE FILM FORMED ON MAGNESIUM ALLOYS IN CASTING CONDITIONS (AZ91)", JOURNAL OF FACULTY OF ENGINEERING (UNIVERSITY OF TEHRAN) ; 41(8 (110)):1023-1030.

7. MIRAK A.R., **DIVANDARI M**., ,ZEBARDAST M, BOUTORABI S.M.A. (FEBRUARY 2007) " THE EFFECT OF IN-GATE VELOCITY ON PERFECT NESS AND MECHANICAL PROPERTIES OF MAGNESIUM CASTINGS ALLOYS (AZ91C)", JOURNAL OF FACULTY OF ENGINEERING (UNIVERSITY OF TEHRAN ; 40(7 (101)):981-990.

8. **DIVANDARI M**, (2007) "BUBBLE TRAILS IN HIGH PRESSURE DIE CASTING COMPONENTS" INTERNATIONAL JOURNAL OF ENGINEERING SCIENCE, FALL 2007; 18(4 (SUPPLEMENT OF METALURGY AND MATERIALS ENGINERING)):1-6 (In Persian with English Abstract).

9. MIRAK A.R., **DIVANDARI M**., BOUTORABI S.M.A. (2007) "CRITICAL GATE VELOCITY IN CASTING MAGNESIUM ALLOYS", AMIRKABIR SCI. J. ; 18(66-C):65-72.

10. SHOJAEI E., **DIVANDARI M**, BOUTORABI S.M.A. (2007) "EFFECT OF ALUMINUM CONTENT ON THE MICROSTRUCTURE, HARDNESS AND MECHANICAL PROPERTIES OF AUSTEMPERED GREY CAST IRON", AMIRKABIR SCI. J.; 18(67-C):89-95.

Persian Science Promotion Journal Papers (English Abstract):

مقالات چاپ شده در مجلات علمی-ترویجی فارسی

1. S.M. Emami, M. Divandari, H. Arabi, S.H. Razavi, E. Hajjari, The study of dissimilar

aluminum and magnesium joining by compound casting process, 5rd International and 12th National Conference on Manufacturing Engineering, Tehran, Iran, 2011. (In Persian).

2. S.M. Emami, M. Divandari, H. Arabi, S.H. Razavi, E. Hajjari, The study of dissimilar aluminum and magnesium joining by compound casting process, 5rd International and 12th National Conference on Manufacturing Engineering, Tehran, Iran, 2011. (In Persian).

Iranian Conference Papers (Recent):

3. S.M. Emami, M. Divandari, H. Arabi, S.H. Razavi, E. Hajjari, The study of dissimilar aluminum and magnesium joining by compound casting process, 5rd International and 12th National Conference on Manufacturing Engineering, Tehran, Iran, 2011. (In Persian).

4. S.M. Emami, M. Divandari, H. Arabi, S.H. Razavi, E. Hajjari, Comparison between bonding of Al/Mg and A413/Mg couples by the compound casting process, 5th Joint Conference of the Iranian Metallurgical Engineering Society and Iranian Foundrymen's Society, Isfahan, Iran, 2011. (In Persian)

5. Mehdi Heydari , Hassan Sharifi , Alireza Khavandi , Mehdi Divandari, Effect of reinforcement pore size on dry sliding wear behavior of Al- Mg/ZrO composites produced via pressureless infiltration method, 5th Joint Conference of the Iranian Metallurgical Engineering Society and Iranian Foundrymen's Society, Tehran, Iran, 2011. (In Persian)

6. Bashir Ajami, M. Divandari, Hossein Arabi, Investigating the effect of foam pattern on the graphite morphology of plates in the in mold lost foam casting process, 5th Joint Conference of the Iranian Metallurgical Engineering Society and Iranian Foundrymen's Society, Tehran, Iran, 2011. (In Persian)

7. H. R. Pakzaman, A. R. Khavandi, M. Divandari, Effect of the volume fraction of reinforcement on the wire/matrix interface and mechanical properties of steel wire-reinforced A356 aluminum alloy composite, 5th Joint Conference of the Iranian Metallurgical Engineering Society and Iranian Foundrymen's Society, Tehran, Iran, 2011. (In Persian).

8. H. Khanepaz*, M. Divandari and M. Shahmiri, Effect of Magnesium Insert on the Microstructure and Microhardness of A356 Aluminum Alloy via Compound Casting, 5th Joint Conference of the Iranian Metallurgical Engineering Society and Iranian Foundrymen's Society, Tehran, Iran, 2011. (In Persian).

9. S.M. Emami, E. Hajjari, M. Divandari, H. Arabi, S.H. Razavi, The Study of Using

Lost Foam Casting on Joining of Aluminum and Magnesium Dissimilar Metals by Compound Casting Process, 4th Joint Conference of the Iranian Metallurgical Engineering Society and Iranian Foundrymen's Society, Tehran, Iran, 2010. (In Persian)