

# *Curriculum vitae*

## **Prof. Dr. Taha Mattar**

### **Acting President of Central Metallurgical Research & Development Institute**

**Family name:** Mattar  
**First names:** Taha Mohamed Taha  
**Nationality:** Egyptian  
**Education:** PhD, MSc, BSc in Science and MSc in Economics

<i>Institution: Date from – date to</i>	<i>Degree(s) or Diploma(s) obtained:</i>
University of Rome II, Tor Vergata, Italy; 2009-2011	Master of Science in Economics
University of Helwan, Egypt, 1992-1996	PhD in Chemistry, Materials Science
University of Helwan, Egypt, 1988- 1991	MSc in Chemistry, Materials Science
University of Helwan, Egypt, 1983-1987	BSc in Chemistry, Materials Science

#### **Language skills: Indicate competence on a scale of 1 to 5 (1 – excellent; 5 – basic)**

<i>Language</i>	<i>Reading</i>	<i>Speaking</i>	<i>Writing</i>
Arabic	mother tongue	mother tongue	mother tongue
English	Excellent	Excellent	Excellent
Italian	Excellent	Excellent	Excellent
French	Sufficient	Sufficient	Sufficient
German	Sufficient	Sufficient	Sufficient

#### **Membership of Professional bodies:**

- Member in Egyptian Syndicate of Scientific Profession, 1987 - till now
- Member in Egyptian American Scholars Association, 1994 - till now
- Member in ASM International, 1999 - 2007
- Board Member in the Egyptian Society of Heat Treatment, 2004 - till now
- Founder of the Egyptian Scientific Community at Pittsburgh (ESCP), 2005 - till now
- Founder of German Egyptian Network of Young Scientists (GENYS)
- Member of Scientific Committee, Calabria Institute for International Policies, IsCaPI, Cosenza, Italy, 2010- till now
- Board member, CMRDI, 2013- Now
- Member in the scientific council, Tibein Institute for Metallurgical Studies, December 2015- Now

#### **Other skills:**

- Winner of Egyptian state prize in advanced technological sciences, 2002
- Project management, evaluation and monitoring
- Leadership and team workability in multicultural environment
- Risk management
- Time management
- International cooperation expert
- Fund raising skills
- Strong command of computer soft wares and applications for processing and results evaluation
- Market & feasibility studies expert
- Techno-preneurship training program, ISTIC- KISR, Kuwait, 2013
- Top Management training program, WAITRO, KL, Malaysia, 2014

**Present position:**

- Acting President, Central Metallurgical R&D Institute (CMRDI), Egypt, July 2016
- Head of Metals Technology Division, Central Metallurgical R&D Institute (CMRDI), Egypt
- Advisor of Industrial and International Cooperation, Knowledge Innovation Academy; KIAc
- Advisor of sponsors programs, projects management, technology transfer and technical education; British University in Egypt
- Managing board member, CMRDI, Egypt
- Member of Scientific council, Tibeen Institute for Metallurgical Studies (TIMS), Egypt
- Member of scientific committee, Calabria Institute for International Policies (IsCaPI), Italy

**Key qualifications**

- Advisor, Vocational and Technical Education scholarship program, IsCaPI, Italy (2009- Now)
- Advisor, Vocational and Technical Education scholarship program, Misr Elkheir Foundation, Egypt (2010- 2013)
- Advisor, Vocational and Technical Education development and technology transfer, BUE, Egypt (2016- Now)
- Project manager and Industry Academia linkage, SDF, Egypt, EC\_TEMPUS\_DIMPTOT\_2005 (2005-2014)
- Advisor, Industrial training and internship, Heliopolis University for Sustainable Development, Egypt (2005- 2016)

**Specific experience in the region:**

<i>Country</i>	<i>Date from – date to</i>
Egypt	1988- 2016
Italy	1993-1995
France	2000
Germany	2001-2004
USA	2005
Italy	2009-2012

**Professional experience record:**

<i>Date from Date to:</i>	<i>Location</i>	<i>Company&amp; reference person (name &amp; contact details)</i>	<i>Position</i>	<i>Description</i>
June 1988- June 1991	Cairo, Egypt	Central Metallurgical R&D Institute (CMRDI)	Assistant Researcher	Performing MSc research work and participating in applied and industrial projects in the field of steel and ferroalloys
June 1991- Feb. 1993	Cairo, Egypt	Central Metallurgical R&D Institute (CMRDI)	Research Assistant	Performing PhD research work and participating in applied and industrial projects in the field of steel and ferroalloys
Feb. 1993- Feb. 1995	Turin, Italy	Politenico di Torino	PhD Student	Performing PhD research work
Feb. 1995- June 1996	Cairo, Egypt	Central Metallurgical R&D Institute (CMRDI)	Research Assistant	Performing PhD research work and participating in applied and industrial projects in the field of steel and ferroalloys
June 1996- Oct.2000	Cairo, Egypt	Central Metallurgical R&D Institute (CMRDI)	Researcher	Performing research work and participating in applied and industrial projects in the field of steel and ferroalloys
Oct. 2000- Jan. 2001	Nancy, France	Ecole des Mines de Nancy (EMN)	Visiting researcher	Performing research work in the field of electroslag refining and modelling of metallurgical processes
Jan. 2001- Oct. 2001	Cairo, Egypt	Central Metallurgical R&D Institute (CMRDI)	Researcher	Performing research work and participating in applied and industrial projects in the field of steel and ferroalloys
Oct. 2001- July.2003	Aachen, Germany	Institute of Ferrous Metallurgy, IEHK, RWTH-Aachen	Visiting researcher	Performing research work in the field of precipitation and transformation behaviour of microalloyed steels
July 2003- May 2005	Cairo, Egypt	Central Metallurgical R&D Institute (CMRDI)	Associate Professor	Performing research work and participating in applied and industrial projects in the field of steel and ferroalloys
May 2005- Jan. 2006	Pittsburgh, USA	Carnegie Mellon University (CMU)	Visiting scientist	Performing research work in the field of simulation of precipitation and transformation behaviour of alloyed steels
Jan 2006- Feb. 2009	Cairo, Egypt	Central Metallurgical R&D Institute (CMRDI)	Associate Professor	Performing research work and participating in applied and industrial projects in the field of steel and ferroalloys
Feb. 2009- July 2012	Rome, Italy	Egyptian Embassy in Rome, Cultural Bureau	Director and Attaché	Managing Egyptian Educational mission and scientific and cultural relations between Egypt and Italy
July 2012- June 2013	Cairo, Egypt	Central Metallurgical R&D Institute (CMRDI)	Professor	Performing research work and participating in applied and industrial projects in the field of steel and ferroalloys
July 2012- July 2013	Cairo, Egypt	Misr Elkheir Foundation	Advisor of cooperation	Managing the scientific and educational relations
June 2013- Now	Cairo, Egypt	Central Metallurgical R&D Institute (CMRDI)	Head of Metals Technology Division	-Managing the scientific activities of the division and the four departments belonging to it -Performing research work and participating in applied and industrial projects in the field of steel and ferroalloys
Nov. 2011- Dec. 2015	Cairo, Egypt	Heliopolis University for Sustainable Development	Advisor of Academia/ Industry Cooperation	Managing Technology Transfer Office Managing Strategic Alliance of the University Managing the internship program for students

**Awards:**

**2014:** Technical Education Enhancement symposium, FASRC, Khartoum, Sudan

**2014:** H2020 Meeting and WAITRO Assembly, EU, Copenhagen, Denmark

**2014:** Top Management training program, WAITRO, KL, Malaysia

**2013:** MedPol Summer School, IsCaPI, Calabria, Italy

**2013:** Technopreneurship managerial training Program, ISTIC, Kuwait

**2011:** Misr Elkheir Foundation Moral Recognition for the efforts in the Italian technical education scholarships for Egyptian students

**2010:** Fashion Ambassador for the Fashion Designers Union in Calabria Region

**2010:** Member of the scientific committee, Calabrian Institute of International Politics, Italy

**Feb. 2009:** Nominated as the Egyptian Cultural Attaché to Italy (2009- 2012)

**2005:** National Science Foundation, USA 2-month award

**2005:** US-Egypt Science and Technology program 6-month award

**June 2003: Egyptian state prize in advanced technological sciences for the year 2002**

**October 7th-10th, 2002:** ASM International Materials Solutions Conference, Columbus, Ohio, USA

**2002:** IB-BMBF Juelich, Germany one year award at IEHK, RWTH-Aachen, Germany

**October 2001 - December 2001:** DAAD award at IEHK, RWTH-Aachen, Germany

**June 14th-20th, 2001:** ACS NORM2001 Conference American Chemical Society, Seattle, WA, USA

**March 2001:** CMRDI three weeks award at SMIC, Politecnico di Torino, Turin, Italy

**October 2000 - January 2001:** Egyptian Government, Department of Missions award at LSG2M, EMN, Nancy, France

**May 1999:** CMRDI three weeks award at SMIC, Politecnico di Torino, Turin, Italy

**1993-1995:** Italian Ministry of Foreign Affairs award at SMIC, Politecnico di Torino, Turin, Italy

**Research Projects**

**1. Project:** Follow-up quality, control at El-Nasr Steel Pipes and Fittings Co., Helwan, Cairo, Egypt, 1990.

**Sponsor:** El-Nasr Steel Pipes & Fittings Co.

**Position:** Member of research team.

**2. Project:** Introduction of oxygen blowing technology in 25- tone EAF of Delta Steel Mill Co., Cairo, Egypt 1990

**Sponsor:** Delta Steel Mill Co.

**Position:** Member of research team.

**3. Project:** Study of Desulphurization Processes of Steel in OHF”, NAMTIN Co., Cairo, Egypt 1988 -1990

**Sponsor:** NAMTIN Co. , Cairo, Egypt .

**Position:** Member of research team.

**4. Project:** Study of some technical defects of steel pipes, 1991.

**Sponsor:** El-Nasr Steel Pipes and Fittings Co., Cairo, Egypt.

**Position:** Member of research team.

**5. Project:** Production of high strength low alloy steels in open-hearth and electric arc furnaces, 1991.

**Sponsor:** NAMTIN Co., Cairo, Egypt.

**Position:** Member of research team.

**6. Project:** Implementation of water-cooled roof in 5-tone EAF, 1992.

**Sponsor:** Egyptian Iron and Steel Co., Cairo, Egypt.

**Position:** Member of research team.

**7. Project:** Follow-up quality control, Elnasr Steel Pipes and Fittings Co., Cairo, Egypt, 1992

**Sponsor:** El-Nasr Steel Pipes & Fittings Co.

**Position:** Member of research team.

**8. Project:** Introduction of oxygen blowing technology in 36-tone EAF in the national company for metallurgical industries (NAMTIN), 1992.

**Sponsor:** NAMTIN Co., Cairo, Egypt.

**Position:** Member of research team.

**9. Project:** Production of ferroalloys from local resources, 1992

**Sponsor:** Egyptian Academy of Scientific Research and Technology.

**Position:** Member of research Team.

**10. Project:** Production of specific grades of special steel in Delta steel mill company, 1992.

**Sponsor:** Egyptian Academy of Scientific Research and Technology.

**Position:** Member of research team.

**11. Project:** Implementation of water cooled walls (water cooling panels) in 25 tones electric arc furnace EAF, Nov. 1995.

**Sponsor:** Delta steel mill co. (Egypt) and MEFOS Institute (Sweden)

**Position:** Member of the research team

**12. Project:** Improvement of sugar steel chains in Hawmdia equipment's factories. Sponsor: Hawmdia equipment's factories (HEF), Giza, Egypt, 1995

**Position:** Member of research team

**13. Project:** Productivity & quality improvements of ferromanganese production in Sinai Manganese Co., 1995.

**Sponsor:** Sinai Manganese Co.

**Position:** Member of research team.

**14. Project:** Follow-up quality control of steel pipes and tool steels at El-Nasr Steel Pipes and Fittings Co., Helwan, Cairo, Egypt, 1995 – 1996.

**Sponsor:** El-Nasr Steel Pipes & Fittings Co.

**Position:** Member of research team.

**15. Project:** Improvement of steel heat treatment shop in Hawamdia Equipment's Factories, 1996.

**Sponsor:** Hawmdia equipment's factories (HEF), Giza, Egypt.

**Position:** Member of research team.

**16. Project:** Productivity & quality improvements of ferromanganese production in Sinai Manganese Co., 1996.

**Sponsor:** Sinai Manganese Co.

**Position:** Member of research team.

**17. Project:** Implementation of water-cooled roof in 25 tones electric arc furnace EAF, Nov. 1996-1997.

**Sponsor:** Delta steel mill co. (Egypt) and MEFOS Institute (Sweden).

**Position:** Member of the research team.

**18. Project:** Improvement of steel grades used in chain manufacturing in Hawmdia Equipment's Factories, 1997.

**Sponsor:** Hawmdia equipment's factories (HEF), Giza, Egypt.

**Position:** Member of research team.

**19. Project:** Market & feasibility studies of Silicon Carbide manufacturing line, 1997.

**Sponsor:** HMEF, Hawmdia, Giza, Egypt.

**Position:** Responsible and designer of the study.

**20. Project:** Quality improvement of galvanization & heat treatment shops at El-Nasr Steel Pipes and Fittings Co., Helwan, Cairo, Egypt, 1997.

**Sponsor:** El-Nasr Steel Pipes & Fittings Co.

**Position:** Member of research team.

**21. Project:** Steelmaking pollution control in Egyptian steel shops, 1997.

**Sponsor:** Holding Company for Metallurgical Industries, Cairo, Egypt.

**Position:** Member of the research team.

**22. Project:** Market & Feasibility study for silicon carbide spare parts production line, 1997

**Sponsor:** Hawmdia equipment's factories (HEF), Giza, Egypt.

**Position:** Computer designer of the study

**23. Project:** Melting of steel tools at El-Nasr Steel Pipes and Fittings Co., Helwan, Cairo, Egypt, 1998.

**Sponsor:** El-Nasr Steel Pipes & Fittings Co.

**Position:** Member of research team.

**24. Project:** Productivity & quality improvements of ferromanganese production in Sinai Manganese Co., 1998.

**Sponsor:** Sinai Manganese Co.

**Position:** Member of research team.

**25. Project:** Improvement of steel grades used in chain manufacturing and optimization of tool steel grades in Hawamdia Equipment's Factories, 1998.

**Sponsor:** Hawmdia equipment's factories (HEF), Giza, Egypt.

**Position:** Member of research team.

**26. Project:** Market & Feasibility study for silicon manganese factory, 1998

**Sponsor:** Sinai Manganese Co.

**Position:** Computer designer of the study

**27. Project:** Production of steel shots, National Project, 1999

**Sponsor:** Egyptian Academy of Scientific Research and Technology.

**Position:** Member of research team



**28. Project:** Production of high strength steel for pre-stressed concrete National Project, 1999

**Sponsor:** Egyptian Academy of Scientific Research and Technology.

**Position:** Member of research team.

**29. Project:** Production of Cored wire for powder alloying in steel making National Project, 2000

**Sponsor:** Egyptian Academy of Scientific Research and Technology.

**Position:** Member of research team.

**30. Project:** Production Ferromanganese nitrogen alloy 2001 **Sponsor:** Egyptian Academy of Scientific Research and Technology.

**Position:** Member of research team.

**31. Project: Investigation of Phase transformation, precipitation and recrystallisation in microalloyed steels, 2002-2005.**

**Sponsor:** CMRDI- Cairo- Egypt; IEHK, RWTH- Aachen and IB-Juelich of BMBF Germany.

**Position:** Principal Investigator (PI)

**32. Project: Enhancing the properties of metals by laser surface treatment, 2004-2006**

**Sponsor:** Academy of Scientific Research and Technology, Egypt

**Position:** Co-Principal Investigator (Co-PI)

**33. Project: Production of Quasicrystalline Materials, 2004-2006**

**Sponsor:** Central Metallurgical R&D Institute (CMRDI), Cairo, Egypt

**Position:** Principal Investigator (PI)

**34. Project: Investigation of NMI-molten slag interaction using confocal laser scanning microscope, 2004-2005**

**Sponsor:** ASRT (Egypt), NSF (USA) and CMU (PGH, PA, USA)

**Position:** Principal Investigator (PI)

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**35. Project: Investigation the transformation and precipitations in nitrogen alloyed steels using confocal laser scanning microscope, 2005-2006**

**Sponsor:** MSE, CMU, PGH, PA, USA

**Position:** Principal Investigator (PI)

**36. Project:** Decarburization and nitriding of ferromanganese fine in the solid state, 2004- 06

**Sponsor:** ASRT (Egypt), BAS (Bulgaria)

**Position:** Member of research team.

**37. Project: Development of metallic interconnects for solid oxide fuel cells (SOFC'S), 2006-2008**

**Sponsor:** Arab Science and Technology Fund (ASTF), UAE

**Position:** Principal Investigator (PI)

**38. Project: TRIP and TWIP steel production, 2006-2008**

**Sponsor:** Central Metallurgical R&D Institute (CMRDI), Cairo, Egypt

**Position:** Principal Investigator (PI)

**39. Project: Micro and nano structured steel surfaces by Laser surface alloying, 2007- 2009**

**Sponsor:** AUC, Cairo, Egypt

**Position:** Co-Principal Investigator

**40. Project: Hydrogen storage Materials, 2007- 2009**

**Sponsor:** AUC, Cairo, Egypt

**Position:** Co- Principal Investigator

**41. Project: EC\_JEP\_DIMPTOT\_2005, 2007-2010**

**Sponsor:** EC

**Position:** Project Coordinator

**42. Project: Implication of the Arab scientific community in the process of decision making, 2009-2010****Sponsor:** ASTF and AECI**Position:** Egyptian representative**43. Project: Measures of support to the innovation of Arab Small and Medium Enterprises, 2009-2010****Sponsor:** ASTF and AECI**Position:** Egyptian representative**44. Project: Investigation of the metal- gas interaction in the conditions of levitation melting under pressure, 2009-2013****Sponsor:** Egypt- Bulgaria Scientific Program**Position:** Co-PI**45. Project: Establishment of Technology Transfer Office at Heliopolis University for Sustainable Development****Sponsor:** ASRT- Egypt, 2013-2016**Position:** PI**46. Project: Technology package and know- how transfer of tool steel production****Sponsor:** STDF- Egypt Program, 2015**Position:** PI**47. Project: Production of Ferrosilicon- Aluminum alloy from waste and low grade local ores****Sponsor:** STDF- Egypt Program, 2015**Position:** Co-PI**48. Project: Technology transfer of steel shots and steel grits production to the industry****Sponsor:** STDF- Egypt Program, 2015**Position:** Co-PI**49. Project: Know- how of ultra-fine high strength- high-toughness and Impact strength economic steel****Sponsor:** STDF- Egypt Program, 2015**Position:** Co-PI

**50. Project: Technology transfer of nanotechnology and nanoinoculation in steelmaking**

**Sponsor:** ASRT- Egypt/ Bulgaria Program, 2016-2019

**Position:** PI

**51. Project: Improving and developing solid oxide fuel cells via metallic interconnects**

**Sponsor:** ASRT- Egypt/ Italy Program, 2016-2019

**Position:** PI

**52. Project: Deepening the local manufacturing in Egypt- Special steels track**

**Sponsor:** ASRT, Egypt - Knowledge and Technological Alliances (KTA), 2016-2018

**Position:** PI

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**Publications**

1. K.A. M. El Fawakhry, M.L. Mishreky, M.M. Eissa and **Taha Mattar**; "Behavior of sulphur in basic open-hearth furnaces" Middle East Sulphur symposium, NRC, Cairo, Egypt, 12-16 Feb.1990.
2. K.A. M. El Fawakhry, M.L. Mishreky, M.M. Eissa and **Taha Mattar**; "Study of Parameters affect the Dephosphorization process of steel in open-hearth furnaces ", 3<sub>rd</sub> Mining, Petroleum and Metallurgy Conference, MPM, Faculty of Engineering, Cairo University; Giza, Egypt, 2-4 Feb. 1992.
3. Usama Rahoma and **Taha Mattar**; "Effect of Steelmaking industrial pollutants on Solar Energy Performance", Air pollution conference, Riyadh, Saudi Arabia Kingdom, June 1997.
4. **Taha Mattar** and Usama Rahoma; "Environmental pollution impact of ferromanganese industry and its effect on solar spectrum" 6th International conference on Energy and Environment EE6, May 1998.
5. Kamal Elfawakhry, Micheal Mishreky, Mamdouh Eissa, Hoda Elfaramawy and **Taha Mattar**; "Implementation of water cooled system in small and medium electric arc furnace in Egypt" AISU 2nd International Symposium on Electric Furnace, Arab Iron and Steel Union, Damascus, Syria, October 18-20, 1998.
6. Kamal Elfawakhry, Micheal Mishreky, Mamdouh Eissa, Hoda Elfaramawy and **Taha Mattar**; "Efficiency of cooled systems in small and medium electric arc furnaces", 56th Electric arc furnaces conference, N.O., LA, USA, November 15-18, 1998.
7. **Taha Mattar**, Mamdouh Eissa and Kamal El Fawakhry;"Nitrogen behavior during Electro-slag remelting (ESR) of tool steels" 5th International tooling conference, Leoben, Austria, Sep. 29th - Oct. 1st, 1999.
8. **Taha Mattar**, Hoda El Faramawy, Ayman Fathy, Mamdouh Eissa and Kamal El Fawakhry; "Optimization of desulphurization of tool steels during EAF and ESR processes", Metal2001, Ostrava, Czech Republic, May 15th -17th, 2001.
9. **Taha Mattar**, Hoda El Faramawy and Ayman Fathy "Refining and cleaning of AISI M2-high speed steel by electro-slag remelting", ACS NORM2001, Seattle, WA, USA, June 14th -17th, 2001.
10. Ayman Fathy, Hoda El Faramawy, **Taha Mattar** and Wolfgang Bleck; "Phase transformation of new low-nickel cobalt-free maraging steels", 1st International conference on treatment and properties of steel, TIMS, El-Tibeen, Cairo, Egypt, November 11th -13th, 2001.
11. **Taha Mattar**, Hoda El-Faramawy and Ayman Fathy; "Behaviour of non-metallic inclusions during ESR of tool steels", AIM, 7th European Electric steelmaking conference, Venice, Italy, 26th-29th May 2002, V. 2, p. 2.473/2.481.
12. **Taha Mattar**; "Electro-slag remelting of AISI M41 high speed tool steel scrap" 6ITC, 6th International tooling conference 10th -13th September 2002, Karlstad, Sweden, p. 339-343.

13. **Taha Mattar**, Hoda El-Faramawy, Ayman fathy, Mamdouh Eissa and Kamal El-Fawakhry; "Effect of EAF and ESR technologies on the behavior of alloying elements in tool steels" 6ITC, 6th International tooling conference 10th -13th September 2002, Karlstad, Sweden, p. 345-354.
14. **Taha Mattar**, Ayman Fathy and Wolfgang Bleck; "Phase transformation in medium and high carbon vanadium microalloyed steel" Microalloyed Steels 2002, Proceedings from ASM Materials Solutions Conference 2002, 7-9 October 2002, Columbus, Ohio, ASM International, p. 71-77.
15. **Taha Mattar** "Improving the properties of low-alloy steel by chromizing", Egypt. J. Chem. Vol.45, No. 1, p.179-192, (2002).
16. Mamdouh Eissa, Hoda El-Faramawy, **Taha Mattar**, Ayman Fathy and Kamal El-Fawakhry; "Development of new grades of steel shots for casting cleaning" Steel Research, V 73, Feb. 2002, p. 69-76.
17. Mamdouh Eissa and **Taha Mattar**; "Mechanical properties relationships in V- and Ti-microalloyed steels" Steel Research, V 73 (2002) No 9, p. 403- 408.
18. **Taha Mattar** and Usama Rahoma "Effect of metallurgical activities on environmental situation and solar radiation"; Journal of Materials Science and Technology, Vol. 10, 2002, No. 3, p. 35- 44.
19. **Taha Mattar**, "Improvement of low-alloy steel"; Journal of Materials Science and Technology, Vol. 10, 2002, No. 4, p. 19- 27.
20. Ayman Fathy, **Taha Mattar**, Hoda El-Faramawy and Wolfgang Bleck, "Mechanical properties of low nickel cobalt free maraging steel", Steel Research V73, No. 12, 2002, p. 549- 556.
21. Hoda El-Faramawy, **Taha Mattar**, Ayman Fathy, Mamdouh Eissa and Saied Ghali, "Production of Fe-Si-Mg alloy", Scandinavian Journal of Metallurgy SJM, 2003, 32, p. 37-46.
22. El-Faramawy, H.; **Mattar, T.**; Eissa, M; El-Fawakhry, K. and Ahmed, A.; "Demanganization of high manganese pig iron to produce high manganese slag", Ironmaking & Steelmaking, 1, February 2004, vol. 31, issue 1, p. 23- 30.
23. El-Faramawy, H.; **Mattar, T.**; Fathy, A.; Eissa, M; and Ahmed, A.; "Silicon manganese production from manganese rich slag", Ironmaking & Steelmaking 1, February 2004, vol. 31, issue 1, p. 31- 36.
24. Ayman Fathy, Hoda El-Faramawy, **Taha Mattar**, Mamdouh Eissa and Wolfgang Bleck "Phase Transformation in new low nickel cobalt free maraging steels", 13th International Metallurgical& Materials Conference Metal2004, Hardec and Moravici, Czech Republic, 18-20 May 2004, Symposium C article 211, p. 1-13.
25. **Taha Mattar**, Mamdouh Eissa, Azza Ahmed, Mahmoud El-Demerdas and Hossam Halfa, "Nitrogen behaviour during ESR of conventional and new grade of AISI M41 high speed steel", HNS2004 Conference, Ostend, Belgium, Steel Grips, 19-22 September 2004, p. 363-370

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26. **Mattar** and Taher El-Bitar;” Investigation of the mutual effects of ESR and forging process on the properties of V-microalloyed steel”, The 2nd Int. Con. on heat treatment and properties of steel”, TIMS, El-Tibeen, Cairo, Egypt, Nov. 2004, p. 182- 189.
  27. Ghayad,Ibrahim; **Mattar, Taha**; Fathy, Ayman, El-Sentriesy, Hassan and Naseef, Nabil, “Influence of vanadium on the properties and corrosion behavior of carbon steel”, Steel Grips, No. 4, 2004, p. 274-278.
  28. **Taha Mattar**; Hoda El-Faramawy, Ayman Fathy, Mamdouh Eissa and Kamal El-Fawakhry, “ Improving the cleanliness of tool steels by ESR”, Steel Grips, No. 4, 2004, p. 287-290
  29. Mamdouh Eissa, Ayman Fathy, Azza Ahmed, **Taha Mattar** and Ismail Saad, “Treatment of high manganese hot metal for further processing in oxygen converter”, 5<sup>th</sup> European Oxygen Steelmaking Conference(EOSC2006), 26-28 June 2006, Aachen, Germany, pp. 23- 37.
  30. M. Eissa, **T. Mattar**, A. Fathy, F. Nassar and M. Kamal, “Effect of physical properties and chemical composition of ESR slags on the cleanliness and properties of a new grade of maraging steel”, 45<sup>th</sup> Annual Conference of Metallurgist of CIM; COM2006; Montreal, Quebec, Canada, October1- 4, 2006; pp. 39- 50.
  31. Azza Ahmed, **Taha Mattar**, Hoda El Faramawy, Ayman Fathy and Mamdouh Eissa, “Solid state nitriding of high and medium carbon ferromanganese”, Canadian Quarterly (CQM), Volume 45, Number 4, October 2006, pp. 493-498.
  32. **Taha Mattar**; “Ferrous quasicrystals”, ARABCAST, Sharm El-Shaikh, Egypt, 14- 17 November 2006.
  33. **Taha Mattar**, Kamal El-Fawakhry, Hossam Halfa and Mahmoud El-Demerdash; “Effect of nitrogen alloying and ESR process on the properties of AISI M41 steel”, Metallurgical& Materials Transactions B, V. 37, No. 6, Dec. 2006, pp. 987- 995.
  34. **Taha Mattar**; “Development of Metallic Interconnects for Solid Oxide Fuel Cells (SOFC’s)”, SRO4. Damascus, Syria, 11- 14 December 2006.
  35. **Taha Mattar**; "Quasicrystalline Materials", SRO4. Damascus, Syria, 11- 14 December 2006.
  36. **Taha Mattar**; "New Strategy for Education and Scientific R&D in Arab Countries", SRO4. Damascus, Syria, 11- 14 December 2006.
  37. **Taha Mattar**, Ayman Fathy, Hoda El-Faramawy and Khaled Ibrahim; “Improving the wear resistance of M41 steel by nitrogen alloying and ESR”, Materials Characterization online 14 August 2006, Characterization, Issue June 2007.
  38. **Taha Mattar**, Ayman Fathy, Mamdouh Eissa, Fahim Nassr and Mohamed Kamal, “Role of refining process in improving the properties of new developed grades of maraging steels”, Clean steel 7, Budapest, Hungary, 5-7 June 2007.
  39. **Taha Mattar**, "Role of R&D Institutions, Scientific networks and NGO's in fighting poverty", Experiences in Fighting Poverty in Arab and Islamic countries Conference, Blida, Algeria, 1-3 July 2007.

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40. **Taha Mattar** and Sridhar Seetharaman, "Visualization and Investigation of the Dissolution of Zirconia in Synthetic Slags", MPM 07 Conference, CMRDI, Cairo, Egypt, 19-22 November 2007.
  41. **Taha Mattar**, Ehab Abdel Rahman, Ahmed Abdel-Aziz and Haytham El-Gazzar; "Development of nano- structured aluminum surfaces by LSM" 2<sup>nd</sup> International Conference on Multifunctional Nanocomposites and nanomaterials, MN2008, ASME and AUC, January 11-13, 2008, Sharm El-Shaikh, Egypt.
  42. Ehab Abdel Rahman, **Taha Mattar**, Hanady Salem and Haytham El-Gazzar; "Micro and nano structured steel surfaces by Laser surface alloying" 2<sup>nd</sup> International Conference on Multifunctional Nanocomposites and nanomaterials, MN2008, ASME and AUC, January 11-13, 2008, Sharm El-Shaikh, Egypt.
  43. Ehab Abdel Rahman, **Taha Mattar**, Amr Sharaawy and Haytham El-Gazzar; "Hydrogen storage quasicrystals" 2<sup>nd</sup> International Conference on Multifunctional Nanocomposites and nanomaterials, MN2008, ASME and AUC, January 11-13, 2008, Sharm El-Shaikh, Egypt.
  44. **Taha Mattar**, "Egyptian experience and the role of the Research institution in establishing and developing the technological incubators", First Regional Conference on Scientific and technological Techniques- Technological Incubators, 10-13 March 2008, Khartoum, Sudan.
  45. Ibrahim Ghayad, Madiha Sheib, **Taha Mattar** and Huda Hussein; "Enhancing Corrosion Resistance of Stainless Steel 304 Using Laser Surface Treatment" Key Engineering Materials (KEM), Materials Science and Engineering ([www.scientific.net](http://www.scientific.net)) , V 384, pp 157- 184, (2008).
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