Personal History





I. PERSONAL DATA:

1. Full Name: MohamedHamdyF. M...

Family name First Middle

2. http://misdb.minia.edu.eg/miniaportal/StaffCV.aspx?id=1558

3. ORCID ID: 0000-0003-2547-4520

4. Scopus Author ID: 7102602599

5. **Researcher ID:** B-2430-2013

6. https://www.researchgate.net/profile/Hamdy Mohamed4

7. https://scholar.google.com.eg/citations?user=RskGy9wAAAAJ&hl=en

8. Place & Date of Birth: Mallaway, Minia & 29 /11 / 1965....

9. Nationality: Egyptian.

10. Married: Yes: No: Number of childrenNone. ...

11. Address: Physics Department, Faculty of Science, Minia University, B.O. 61519

Minia, Egypt, Tel./Fax (work): +20-86-2363011, Tel. (home): +20-

86-2583181, Mobile: +20-1208281849.

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II. ACADEMIC QUALIFICATIONS:

Degree	University	Country	Date	Field of Specialization
Ph. D.	Minia	Egypt	29/6/1997	Applied Nuclear Physics
M. Sc.	Minia	Egypt	3/2/1992	Nuclear Physics
B. Sc.	Minia	Egypt	30/5/1987	Physics

Master thesis title:

"Short Lifetime Measurements of Some Excited States in Radioactive Sources"

Ph.D. thesis title:

"Study of Positron and Positronium Interaction with Some Molecular Materials"

Languages/Special Skills:

Arabic	Speaking I	Reading •	Writing T
English	Speaking	Reading	Writing
Japanese	Speaking	Reading	Writing
Computer Skills	Windows 7, Windows XP, Windows 2000, MS Office 2016,		
	Power Point, Publisher, Various Graphic Software, Internet		
	Explorer, Experience Programmer Calculation for Fit and		
	Communication using FORTRAN, BASIC, and LABVIEW		
	software.		

III. PROFESSIONAL EXPERIENCE

Academic Positions:

Title	From - To	University	Country
Professor of Applied Nuclear Physics,	26/8/2008-	Minia	Egypt
Physics Department, Faculty of Science	Till Now		
Head of the Renewable Energy Science & Engineering Department, Faculty of	18/8/2015— 31/7/2018	Beni-Suef	Egypt
Postgraduate Studies for Advanced Science	31///2010		
Professor of Applied Nuclear Physics,	26/8/2008-	Minia	Egypt
Physics Department, Faculty of Science	Till Now	Willia Egy	
Associate Professor, Physics Department,	26/11/2002	Minia	Egypt
Faculty of Science	-25/8/2008	мина Едурі	
Assistant Professor, Physics Department,	29/7/1997-	Minia	Egypt
Faculty of Science	25/11/2002	Minia Egypt	
Instructor/Post-Doctoral, Physics Department,	25/1/1992-	Minia	Egypt
Faculty of Science	28/7/1997		
Teaching Assistant, Physics Department,	22/11/1987	Minia	Egypt
Faculty of Science	-24/2/1992	IVIIIIa	Egypt

Membership of Cultural, Educational and Professional Societies:

M 1 C	Amercain Physical Society (USA) (1-2002 to 1-2007)
Member of	Positron Science Society (Japan) (3-2007 to 3-2015)
• Japanese Society of Radiation Chemistry (Japan) (3-20)	

	2015)
	 2015). Society for Positron Annihilation and Nuclear Probes (India) (1-2015 to 1-2018) Egyptian Physica Society (Egypt) (1-2016 to 1-2017). Egyptian Nuclear Physics Association (Egypt) (1-1992 to Now). Egyptian Society of Solid State Science and Application (Egypt) (1-1992 to Now). Egyptian Society of Polymer Science and Technology (Egypt) (1-1992 to Now).
Committee	 International Scientific Committee of the International Workshop of Positron and Positronium Chemistry from 2017 till 2026. International Relation of Faculty of Science, Minia University from 6/2019 till now
Editorial of	 Journal of Solid State Physics, Hindawi Publishing Corporation, UK (2016-2017). World Journal of Applied Physics, Science Publishing Group, USA (2016). Fine Chemical Engineering, Universal Wiser Publisher, USA (2019-date) Egyptian Journal of Physics, Egypt (2019-date). https://ejphysics.journals.ekb.eg/journal/editorial.board SCIREA Journal of Physics, Science Research Association, USA (2019-date). https://www.scirea.org/journal/EditorialBoard?JournalID=1400 Insight – Physics, PiscoMed Publishing, Singapore (2019-date) Nanoarchitectonics (NAT), Universal Wiser Publisher, Singapore (2019-date).
Reviewer of	 Egyptian Community for the Promotion of Professor and Associate Professor Degree. Egyptian MSC thesis. Project for collaborative research between Egyptian Institute (National Research Center) and Italian (CNR-TAE Institute of Energy Technology) under Academy of Scientific Research and Technology, Egypt. Indian Ph.D. Thesis Czech Science Foundation. Sudia Arabia Projects (Tabuk University).

	 Polymer, Journal of Applied Polymer Science, Industrial & Engineering Chemistry Research, Journal of Physics: Conference Series, Journal of Polymer Engineering, Journal of Molecular Structure, Journal of Research in Environmental Science and Toxicology, Journal of Alloys and Compounds, Egyptian Journal of Physics, Materials Science Forum, Applied Energy, Applied Radiation and Isotopes, Current Nanoscience. 		
Workshop or Conference organizations	 Environmental Physics Conference 24-28/2/2004, (Minia University, Minia). Workshop on Enhancing Modeling and Simulation Technology in Training and Education of Physics, 8/12/2005 (Minia University, Minia). 3nd International Conference on Advanced Basic & Applied Sciences (ABASIII), 17-20/11/2015 (Beni-Suef University, Hurghada). Recent Advances in Renewable Energy Technologies-I, 28/2/2016 (Beni-Suef, Beni-suef University) Recent Advances in Renewable Energy Technologies-II, 18/3/2017 (Beni-Suef, Beni-Suef University). The Fourth International Conference on Advanced Sciences (ISASA) 7-10/11/2017 (Beni-Suef, Giller, ISASA) 7-10/11/2017 (Beni-Suef, Giller, ISASA) 		
Academic advisory	 (ICAS4), 7-10/11/2017 (Beni-Suef University, Hurghada). For the Physics undergraduate students, Physics Department, Faculty of Science, Minia University (2013 -present). For the Science Club of the Faculty of Science, Minia University (2013-2017) As an arbitrator in the Intel International Science and Engineering Fair (Intel ISEF) Egypt. Children's University (Coordinator of the Energy Program) 		
Official License	 Children's University (Coordinator of the Energy Program). From the Egyptian Ministry of Health for "Using ionizing radiation" (14-5-1994). From the Egyptian Ministry of Health in"Record in the list of qualified experts in the prevention of the risk of exposure to ionizing radiation" (24-9-2000). From Nuclear & Radiological Regulatory Authorty, Egypt as "Radiation protection expert for the prevention of exposure to radiation" 12-7-2016 to 11-7-2019. 		
Attended Courses	 "Computer Training" by the Scientific & Statistical Computer Research Center, Cairo University, Egypt (20/7/1985-29/8/1985). "Use of Radioactive Materials and Protection from Radiation" by Atomic Energy Authority, Egypt (11/1/1992-5/2/1992). "International Course and Symposium on Glass Science and Engineering" by The American University in Cairo, Egypt (12/10/1992-22/10/1992) "Pedagogy" by Education Center humanitarian and Technology 		

- Education, Minia University, Egypt (7/11/1993-30/11/1993).
- "Use of radioactive materials and protection from Radiation" by Atomic Energy Authority, Egypt (1/1/1994-5/1/1994).
- "Electromagnetic radiation-produce, effect, uses" by Atomic Energy Authority, Egypt (13/5/2000 to 14/5/2000).
- "Develop the Skills of Youth Care" by Faculty and Leadership Development Project, Minia University, Egypt (28/12/2004-29/12/2004).
- "Development of Effective Presentation Skills" by Faculty and Leadership Development Project, Minia University, Egypt (15/1/2005-17/1/2005).
- "Development of Effective Communication Skills" by Faculty and Leadership Development Project, Minia University, Egypt (29/1/2005-31/1/2005).
- "Decision-making and Problem-solving" by Faculty and Leadership Development Project, Minia University, Egypt (16/5/2005-19/5/2005).
- "Recent Trends in Teaching" by Faculty and Leadership Development Project, Minia University, Egypt (20/5/2005-23/5/2005).
- "Standards of Quality in the Teaching Process" by Faculty and Leadership Development Project, Minia University, Egypt (15/7/2008-17/7/2008).

IV. HONORS: (Names and dates of professional honors, awards, fellowships and scholarships)

Names	Dates
Egyptian scholarship for two years in University of Tokyo,	From 29/11/1994 to
Japan	4/12/1996
Fulbright Postdoctoral Scholarship for five months in Wayne	From 15/2/2002 to
State University, Michigan, USA	14/7/2002
Korean Federation of Science and Technology Societies	From 1/1/2006 to
(KOFST) award me fellowship under the Brain Pool	31/12/2006
Program, Korean Atomic Energy Research Institute,	
Daejeon, Republic of Korea.	
Arab Fund for Economic and Social Development	From 1/1/2007 to
scholarship for one year in, National Institute of Advanced	31/12/2007
Industrial Science and Technology (AIST), Tsukuba, Japan	
Visiting researcher in Fuel Cell Cutting-Edge Center (FC-	From 1/1/2008 to
Cubic), Technology Research Association, 2-3-26 Aomi,	31/3/2013
Koto-Ku, Tokyo 135-0064, Japan.	

Award of the International Publication for Science Papers	17/3/2014
from Minia University, Minia, Egypt for the year of 2013.	
Award of the International Publication for Science Papers	4/5/2015
from Minia University, Minia, Egypt for the year of 2014.	
Award of the International Publication for Science Papers	8/5/2018
from Minia University, Minia, Egypt for the year of 2017.	
Award of the International Publication for Science Papers	18/6/2019
from Minia University, Minia, Egypt for the year of 2018.	

V. COURSES TAUGHT

Undergraduate Courses

I have taught the following Courses: General Physics (Heat, properties of matter, waves, electricity, alternating electricity), Electronic, Nuclear Physics, Radiation Physics, Atomic Physics, Atomic, Cosmic rays and Molecular Spectra.

Graduate Courses

I have taught the following Courses: Nuclear Physics, Radiation Physics, Applied Nuclear Physics, Reactor Physics and Nuclear techniques for studying materials science. In addition, I have also taught Advanced fuel cells, Advanced Energy and Environment, Semiconductor Converters and Advanced Polymer membranes for Diploma and Pre-mister students.

VI. PROJECTS:

- 1) I was a co-investigator in the project funding by Higher Education Enhancement Project Fund (HEEPE) 2005 which in the title, "Enhancing Modeling and Simulation Technology in Training and Education of Physics at Minia University".
- 2) I am a co-investigator in the project funding by Science & Technology Development Fund (STDF) under ID. 15113 from the year of 2015 which in the title, "Development of Electrodes using Carbon Nano-fibers for Fuel Cell "
- 3) I am a co-investigator in the project funding by Beni-Suef University "Design, Implementation and Performance of 5 kW Rooftop Grid Connected PV System: Faculty of Postgraduates for Advanced Science: as a Case Study".
- 4) I am a supervisor in the project funding by Academy of Scientific Research and Technology, Egypt for the undergraduate students 2017 which in the title" Synthesis and Characterization of Nano catalyst Materials for Fuel Cell Applications".
- 5) I am a co-investigator in the project funding by funded by Academy of Scientific Research

and Technology, Scientists Egypt 2, 2019, Beni-Suef University which in the title "Nanotechnological Approach for the Implementation of Fuel Cell for Renewable Energy Production by using Plastic Wastes".

- 6) I am an investigator in the project funding by funded by Academy of Scientific Research and Technology, Science Up, 2020, which in the title "Fabrication and characterization of low cost nanomembranes for polymer electrolyte membrane fuel cells".
- 7) I am a co-investigator in the project funding by funded by Academy of Scientific Research and Technology, Science Up, 2020, which in the title "Synthesis and characterization of low cost organic-inorganic hybrid membranes for fuel cells".

VII. RESEARCH EXPERIENCE:

- Study Polymer Electrolyte Membranes for fuel cells as a bulk and thin films using many techniques such as slow positron beam spectroscopy, wide angle x-ray, X-ray photoelectron spectroscopy, water uptake, proton conductivity, contact angle, Fourier transform infrared spectroscopy and so on. I worked for this subject for more than 6 years in the biggest center in Japan, Fuel Cell Cutting-Edge Center (FC-Cubic), Tokyo and I continue this subject in my Minia University lab.
- Investigating of Materials using Nuclear Technique (Positron Annihilation Lifetime and Coincidence Doppler Broadened of Annihilation Radiation Techniques) and Positronmolecule experiments (Positronium formation cross section in gas).
- Professional in experimental nuclear physics (coincidence spectrometer& Gamma, Beta, and Alpha Spectrometers).

VIII. SUPERVISING EXPERIENCES:

Eleven MSc. Students and four PhD. students.

IX. CONFERENCES:

I. INTERNATIONAL CONFERENCES

- 1. 4th Symposium of Research Center for Nuclear Science and Technology, Dec. 4-5, 1995 (the University of Tokyo, Tokyo, Japan).
- 33rd Annual Meeting on Radioisotopes in Physical Science and Industries, July 1-3, 1996 (Tokyo, Japan).
- 3. 39th Japan Radiation Chemistry Symposium, Oct. 15-17, 1996 (Tsukuba, Japan).

- 4. 40th Japan Nuclear Chemistry Symposium, Oct. 22-24, 1996 (Wako, Japan).
- 5. Short Workshop in Solid State Physics, Dec. 2-3, 1996 (the University of Tokyo, Tokyo, Japan).
- 6. 5th Int. Workshop on Positron and Positronium Chemistry (PPC-5), June 9-14, 1996 (Lillafüred, Hungary).
- 7. 11th Int. Conference on Positron Annihilation (ICPA-11), May 25-30, 1997 (Kansas City, Missouri, USA).
- 8. 6th Int. Workshop on Positron and Positronium Chemistry (PPC-6), June 7-11, 1999 (Tsukuba, Japan).
- 9. 12th Int. Conference on Positron Annihilation (ICPA-12), August 6-12, 2000 (München, Germany).
- 10. Meeting of the Division of Atomic, Molecular, and Optical Physics (DAMOP 2002), May 28 June 1, 2002 (Williamsburg, Virginia, USA).
- 11. 7th Int. Workshop on Positron and Positronium Chemistry (PPC-7), July 7-12, 2002 (Knoxville, Tennessee, USA).
- 12. 13th Int. Conference on Positron Annihilation (ICPA-13), September 7-13, 2003 (Kyoto, Japan).
- 13. 8th Int. Workshop on Positron and Positronium Chemistry (PPC-8), September 4-9, 2005 (Coimbra, Portugal).
- 14. International Symposium on Industrial Safety, April 14, 2006 (Chungbuk National University, Chungbuk, Republic of Korea).
- 15. 50th Japan Radiation Chemistry Symposium, Oct. 10-12, 2007 (Kyoto, Japan).
- 16. International Symposium on Charged Particle and Photon Interactions with Matter, Nov. 6-9, 2007 (Tokai, Japan).
- 17. Specialist Meeting on Positron Science and its Application to Science and Engineering, Nov. 16-17, 2007 (Osaka, Japan).
- 18. 9th Int. Workshop on Positron and Positronium Chemistry (PPC-9), May 11-15, 2008 (Wuhan, China).
- 19. The 2nd Asia Pacific Symposium on Radiation Chemistry (APSRC-2008), August 29-September 1, 2008 (Waseda University, Tokyo, Japan).
- 20. 51st Japan Radiation Chemistry Symposium, Oct. 15-17, 2008 (Tsukuba, Japan).
- 21. Specialist Meeting on Positron Science and its Application to Science and Engineering, Dec. 5-6, 2008 (Osaka, Japan).
- 22. 15th Int. Conference on Positron Annihilation (ICPA-15), Jan. 18-23, 2009 (Kolkata, India).

- 23. 58th SPSJ Symposium on Macromolecules, September 16 -18, 2009 (Kumamoto, Japan).
- 24. 52nd Japan Radiation Chemistry Symposium, September 24-26, 2009 (Fukui, Japan).
- 25. Advanced Science Research Symposium 2009 (ASR2009), November10-12, 2009 (Tokai, Japan).
- 26. 11th Pacific Polymer Conference (PPC11), December 6-10, 2009 (Cairns, Australia).
- 27. 59th SPSJ Annual Meeting, May 26 28, 2010 (Yokohama, Japan).
- 28. 47th Annual Meeting on Radioisotope and Radiation Research, July 7 9, 2010 (Odaiba, Japan).
- 29. 53rd Japan Radiation Chemistry Symposium, September 21-23, 2010 (Nagoya, Japan).
- 30. 59th SPSJ Symposium on Macromolecules, September 15-17, 2010 (Hokkaido University, Sapporo, Japan).
- 31. Specialist Meeting on Positron Science and its Application to Science and Engineering, November 26-27, 2010 (Osaka, Japan).
- 32. 60th SPSJ Annual Meeting, May 25 27, 2011 (Osaka, Japan).
- 33. 48th Annual Meeting on Radioisotope and Radiation Research, July 6-8, 2011 (Odaiba, Japan).
- 34. 10th Int. Workshop on Positron and Positronium Chemistry (PPC-10), September 5-9, 2011 (Smolenice Castle, Slovak Republic).
- 35. 60th SPSJ Symposium on Macromolecules, September 28-30, 2011 (Okayama, Japan).
- 36. Specialist Meeting on Positron Science and its Application to Science and Engineering, December 2-3, 2011 (Osaka, Japan).
- 37. The 15th International Symposium, on Batteries, Fuel Cells and Capacitors, October 17-20, 2011 (Tokyo, Japan).
- 38. 61st SPSJ Annual Meeting, May 29-31, 2012 (Yokohama, Japan).
- 39. 49th Annual Meeting on Radioisotope and Radiation Research, July 9-11, 2012 (Tokyo, Japan).
- 40. 61st SPSJ Symposium on Macromolecules, September 19-21, 2012 (Nagoya, Japan).
- 41. 55th Japan Radiation Chemistry Symposium, September 26-28, 2012 (Sandi, Japan).
- 42. 1st China-Japan Joint Workshop on Positron Annihilation, October 16-18, 2012 (Wuhan University, China).
- 43. The 16th International Symposium, on Batteries, Fuel Cells and Capacitors, November 14-16, 2012 (Fukuoka, Japan).
- 44. The 5th Asian Pacific Symposium on Radiation Chemistry (APSRC 2014), September 8-11, 2014 (Tokyo, Japan).

- 45. The 11th Int. Workshop on Positron and Positronium Chemistry (PPC-11), November 9-14, 2014 (Cidade de Goa, Goa, India).
- 46. The Annual Meeting of the International Nuclear Security Education Network, August 22-26, 2016 (International Atomic Energy Agency, IAEA's Headquarters, Vienna, Austria).
- 47. The Annual Meeting of the International Nuclear Security Education Network, July 24-28, 2017 (International Atomic Energy Agency, IAEA's Headquarters, Vienna, Austria).
- 48. The 12th Int. Workshop on Positron and Positronium Chemistry (PPC-12), August 28-September 1, 2017 (Lublin, Poland).
- 49. The Annual Meeting of the International Nuclear Security Education Network, July 9-13, 2018 (International Atomic Energy Agency, IAEA's Headquarters, Vienna, Austria).

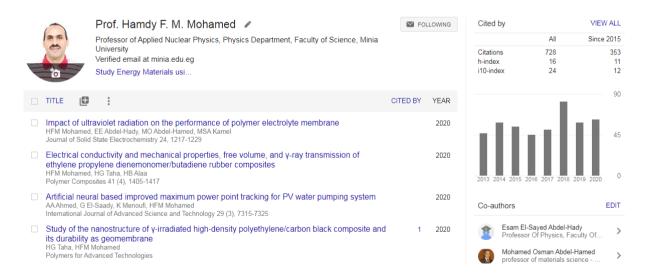
II. INTERNAL CONFERENCES

- 1. 1st Radiation Physics Conference, Nov. 15-19, 1992 (Qena).
- 2. 5th Conference on Nuclear Science and Application, 1992 (Cairo).
- 3. 16th Conference on Solid State Science, Jan. 9-14, 1993 (Minia).
- 4. 1st Conference on Nuclear and Particle Physics Nov. 15-19, 1997 (Cairo).
- 5. 4th Radiation Physics Conference, Nov. 15-19, 1998 (Alexandria).
- 6. 2nd Conference on Nuclear and Particle Physics Nov. 13-17, 1999 (Cairo).
- 7. 5th Radiation Physics Conference, Nov. 5-9, 2000 (Cairo).
- 8. 3rd Conference on Nuclear and Particle Physics Oct. 20-24, 2001 (Cairo).
- 9. 6th Radiation Physics Conference, Oct. 27-30, 2002 (Assiut).
- 10. 7th Arab International Conference of Polymer Science & Technology and the 3rd Arab Conference of Materials Science, Oct. 5-9, 2003 (Cairo-Hurghada).
- 11. 4th Conference on Nuclear and Particle Physics Oct. 11-15, 2003 (Fayoum).
- 12. Environmental Physics Conference 24-28 Feb, 2004 (Minia).
- 13. 7th Radiation Physics Conference, Nov. 29-30, 2004 (Ismailia, Suez Canal).
- 14. The XXV Conference on Solid State Physics and Materials Science & Workshop on Photonic Materials and Optoelectronic Devices (II) 6-10 March 2005 (Luxor).
- 15. 8th Arab International Conference of Polymer Science & Technology, November 27-30, 2005 (Cairo-Sharm El-Shiekh).
- 2nd International Conference on Advanced Basic & Applied Sciences (ABAS II), April 2-4, 2014 (Sokhna).
- 17. 3rd International Conference on Advanced Basic & Applied Sciences (ABAS III), November 17-20, 2015 (Hurghada).

- 18. The 1st International conference of Environmental Security and Global Climate Change (ESGCC-1) April 10-12, 2016 (Beni-Suef University)
- 19. 7th Environmental Physics Conference (EPC"16), September 24-27, 2016 (Sharm el-Sheikh).
- 20. Italian-Egyptian Workshop on Energy & Related Materials, October 17-19, 2016 (Pyramisa Hotel, Dokki).
- 21. The 1st International Conference on Natural Resources and Renewable Energy (ICRRE-1), April 17-20, 2017 (Hurghada).
- 22. 10th Conference on Nuclear and Particle Physics October 7-10, 2017 (Hurghada).
- 23. The Fourth International Conference on Advanced Sciences (ICAS4), November 7-10, 2017 (Hurghada).
- 24. The First International Conference on Particles, Materials and Energy: Advanced Medical and Industrial Applications (FICPME-2018), December 2-6, 2018 (Luxor).
- 25. The First National Conference of the Children's University, January 27-28, 2019, (Cairo).
- The Fifth International Conference on Advanced Sciences (ICAS5), November 9-12, 2019 (Hurghada).

X. CITATION and h-index

Citation: 728 h-index: 16



XI. LIST OF PUBLICATIONS:

- M. A. El-Sayed, E. E. Abdel-Hady and Hamdy F. M. Mohamed, "Time resolution study of staged photomultiplier with a plastic scintillation crystal", 5th Conference on Nuclear Science & Applications (Cairo, Egypt) 2, 752-759, 1992.
- 2. E. E. Abdel-Hady, A. M. A. El-Sayed and **Hamdy F. M.**, "Half lives of two levels in ¹³³Cs", Science Bulletin Minia University 5, 95, 1992.

1993:

- 1. A. M. A. El-Sayed, E. E. Abdel-Hady and **Hamdy F. M.**, "Lifetime measurement of first excited state in ¹⁵²Gd", Arab Journal of Nuclear Sciences and Applications 26-2, 87, 1993.
- 2. **Hamdy F. M. Mohamed** and N. S. Abd El-Aziz, "Molecular weight effect on the microstructure of polymer observed by positrons", 7th Arab International Conference on Polymer Science & Technology, October 5-9/2003. Cairo- Hurghada, Egypt, p. 447-460.

<u> 1996:</u>

- 1. **Hamdy F. M. Mohamed**, Yasuo Ito, Ali M. A. El-Sayed and E. E. Abdel-Hady, "Positron annihilation in poly(vinyl alcohol) doped with CuCl₂", Polymer 37, 1529-1533, 1996.
- 2. Y. Ito, **Hamdy F. M. Mohamed**, V. M. Byakov and S. V. Stepanov, "Inhibition and anti-inhibition effects of electron scavengers in hydrocarbons revisited", Journal of Radioanalytical and Nuclear Chemistry 210, 607-15, 1996.
- 3. **Hamdy F. M. Mohamed**, Yasuo Ito, Ali M. A. El-Sayed and Esam E. Abdel-Hady, "Positron annihilation in poly(vinyl alcohol) doped with CuCl₂", Journal of Radioanalytical and Nuclear Chemistry 210, 469-77, 1996.
- 4. Yasuo Ito, **Hamdy F. M. Mohamed**, Kazuhiro Tanaka, Ken-ichi Okamoto and Keunho Lee, "Sorption of CO₂ in polymers observed by positron annihilation technique", Journal of Radioanalytical and Nuclear Chemistry 210, 211-8, 1996.
- Yasuo Ito, Hamdy F. M. Mohamed and Masaru Shiotani, "Vacancies in the solids of low molecular weight organic compounds observed by positron annihilation", Journal of Radioanalytical and Nuclear Chemistry 210, 599-605, 1996.
- 6. Yasuo Ito, **Hamdy F. M. Mohamed**, Tadao Seguchi and Akihiro Oshima, "Vacancy spectroscopy of radiation cross-linked and degraded polytetrafluoroethylenes", Radiation Physics and Chemistry 48, 775-9, 1996.
- 7. **Hamdy F. M. Mohamed**, Yasuo Ito and Masayuki Imai, "Change of distribution of free volume holes during crystallization of poly(ethylene terephthalate) revealed by positron annihilation lifetime spectroscopy", Journal of Chemical Physics 105, 4841-5, 1996.
- 8. Yasuo Ito, Hamdy F. M. Mohamed and Masaru Shiotani, "Vacancies in the solids of low

molecular weight organic compounds observed by positron annihilation", Journal of Physical Chemistry 100, 14161-5, 1996.

1997:

1. **Hamdy F. M. Mohamed** and A. M. A. El-Sayed, "Study of ortho-positronium hole volume distribution in synthetic zeolites", Materials Science Forum 255-257, 327-9, 1997.

1998:

1. A. T. Mohamed, A. M. A El-Sayed, and **Hamdy F. M. Mohamed**, "Positron annihilation lifetimes in compacted iron powder", Proceedings of the First Nuclear and Particle Physics Conference (NUPPAC-1997), p. 554, Egypt, 1998.

1999:

 Hamdy F. M. Mohamed, A. M. A. El-Sayed and E. E. Abdel-Hady, "Study of sorption in poly(vinyl alcohol) using positron annihilation technique", Journal of Physics: Condensed Matter 11, 4461-7, 1999.

2000:

- 1. **Hamdy F. M. Mohamed** and Gomaa G. Abd-Elsadek, "Positron annihilation investigations on poly(methyl methacrylate)", Radiation Physics and Chemistry 58, 597-601, 2000.
- A. M. A. El-Sayed, Hamdy F. M. Mohamed and Ahmed A. A. Boraei, "Positron annihilation studies of some charge transfer molecular complex", Radiation Physics and Chemistry 58, 791-5, 2000.
- 3. A. M. A. El-Sayed, **Hamdy F. M. Mohamed** and Gomaa G. Abd-Elsadek, "Study of poly(methyl methacrylate) via positron annihilation lifetime spectroscopy", Special Issue on Arab Journal of Nuclear Sciences and Applications V. 34, Part I, p.265-71, 2000.
- 4. **Hamdy F. M. Mohamed**, A. M. A. El-Sayed and A. Z. Hussien, "Study the effect of radiations on poly(ethylene naphthalate) using positron annihilation lifetime technique", Special Issue on Arab Journal of Nuclear Sciences and Applications V. 34, Part I, p.273-8, 2000.
- 5. **Hamdy F. M. Mohamed**, A. M. A. El-Sayed and Gomaa G. Abd-Elsadek, "Effect of temperature on ortho-positronium in poly(methyl methacrylate)", Polymer Degradation and Stability 71, 93-7, 2000.

- 1. E. E. Abdel-Hady and **Hamdy F. M. Mohamed**, "Positron lifetime as a probe for investigation of conducting polystyrene", Materials Science Forum 363-365, 284-6, 2001.
- 2. **Hamdy F. M. Mohamed**, A. M. A. El-Sayed and A. Z. Hussien, "On irradiated poly(ethylene naphthalate) studied by positron annihilation lifetime spectroscopy",

- Materials Science Forum 363-365, 325-7, 2001.
- 3. **Hamdy F. M. Mohamed** and N. S. Abd El-Aziz, "Study on polystyrene via positron annihilation lifetime and Doppler broadened techniques", Polymer 42, 8013-7, 2001.
- 4. **Hamdy F. M. Mohamed,** "Study on the effect of atmosphere on A-type zeolite using positron annihilation lifetime technique", Egyptian Journal of Solid 24, 41-49, 2001.

1. E. E. Abdel-Hady and **Hamdy F. M. Mohamed**, "Microstructure changes of poly(vinyl chloride) investigated by positron annihilation techniques", Polymer Degradation and Stability 77, 449-56, 2002.

2003:

- 1. **Hamdy F. M. Mohamed**, "Study of the effect of electric field on positron annihilation parameters in polymers", Radiation Physics and Chemistry 68, 449-52, 2003.
- 2. T. S. Stein, W. E. Kauppila, E. G. Miller, **Hamdy F. M. Mohamed** and E. Surdutovich "Experimental investigation of ortho-positronium-surface interactions", presented in XXIII International Conference on Photonic Electronic and Atomic Collisions (ICPEAC 2003) July 23-29, 2003 (Stockholm, Sweden).
- 3. E. G. Miller, W. E. Kauppila, **Hamdy F. M. Mohamed**, T. S. Stein and E. Surdutovich, "An investigation of low-energy ortho-positronium–surface interactions", presented in the 34th Meeting of the Division of Atomic, Molecular, and Optical Physics (DAMOP 2003) May 20–24, 2003 (Boulder, Colorado, USA).
- 4. M. A. Ali, **Hamdy F. M. Mohamed** and W. M. Amer, "Biophysical measurements of lead in some biosensors", Egyptian Journal of Biophysics and Biomedical Engineering 4, 1-13, 2003.
- 5. **Hamdy F. M. Mohamed** and N. S. Abd El-Aziz, "Molecular weight effect on the microstructure of polymer observed by positrons", the Proceeding of the 7th Arab International Conference of Polymer Science & Technology and the 3rd Arab Conference of Materials Science (Cairo-Hurghada, Egypt), page 447-60, Oct. 5-9, 2003.
- 6. E. E. Abdel-Hady and **Hamdy F. M. Mohamed**, "Positron annihilation as a probe for free volume distribution in polystyrene-carbon black composite", the Proceeding of the 7th Arab International Conference of Polymer Science & Technology and the 3rd Arab Conference of Materials Science (Cairo-Hurghada, Egypt), page 485-499, Oct. 5-9, 2003

2004:

1. M. H. Abd-El Salam, E. E. Abdel-Hady, **Hamdy F. M. Mohamed** and A. S. Ibrahim, "The effect of wheat hay on carbon black loaded EPDM composite studied by positron

- annihilation lifetime spectroscopy", Materials Science Forum 445-446, 259-61, 2004.
- 2. **Hamdy F. M. Mohamed**, E. E. Abdel-Hady and H. B. Alaa, "Studies of the positron lifetime and Doppler broadening annihilation radiation of polyvinyl chloride doped with Al₂O₃", Materials Science Forum 445-446, 328-30, 2004.
- 3. E. E. Abdel–Hady, H. M. Abdel-Hamid and **Hamdy F. M. Mohamed**, "Electron beam and gamma irradiation effects on conducting polystyrene studied by positron annihilation technique", Radiation Measurements 38, 211-6, 2004.
- 4. Yasser B. Saddeek, **Hamdy F. M. Mohamed** and Moenis A. Azooz, "Structural study of some divalent aluminoborate glass using ultrasonic and positron annihilation techniques", Phys. Stat. Sol. (a) 201, 2053-62, 2004.
- 5. W. E. Kauppila, E. Miller, **Hamdy F. M. Mohamed**, K. Pipinos, T. S. Stein and E. Surdutovich, "Investigations of positronium formation and destruction using $3\gamma/2\gamma$ annihilation ratio measurements", Physical Review Letter 93, 113401-4, 2004.

- 1. R. M. Abdel-Latif, **Hamdy F. M. Mohamed**, E.E. Abdel-Hady and Salwa S. Mohamed, "The effect of temperature on the free volume in polytetrafluoroethylene studied by positron annihilation spectroscopy", the Proceeding of the 8th Arab International Conference of Polymer Science & Technology, Cairo-Sharm El-Shiekh, Egypt, November 27-30, 2005.
- 2. **Hamdy F. M. Mohamed**, E. E. Abdel-Hady and Somia S. Freed, "Positron annihilation as a probe of free volume changes in polyoxymethylene-copolymer", the Proceeding of the 8th Arab International Conference of Polymer Science & Technology, Cairo-Sharm El-Shiekh, Egypt, November 27-30, 2003.
- 3. E. E. Abdel-Hady, **Hamdy F. M. Mohamed** and H. B. Alaa, "Positron annihilation lifetime study of pure and doped polyvinyl chloride with Al₂O₃", the Proceeding of the 8th Arab International Conference of Polymer Science & Technology, Cairo-Sharm El-Shiekh, Egypt, November 27-30, 2005.

- Y. Kim, J. Kwon, Hamdy F. M. Mohamed, C. Kang and W. Kim, "Investigation of point defect distribution in Fe-Cr alloy using positron annihilation", The Proceeding of the Transactions of the Korean Nuclear Society Autuma Meeting, Gyeongiu, Korea, November 2-3, 2006
- 2. Junhyun Kwon, **Hamdy F. M. Mohamed**, Yong-Min Kim, and Whungwhoe Kim, "Positron annihilation lifetime spectroscopy of vacancy-type defects in cold-worked iron", Transactions of the Korean Nuclear Society Spring Meeting Chuncheon, Korea, May 25-26

2006.

2007:

- 1. **Hamdy F. M. Mohamed**, E. E. Abdel-Hady and Salwa S. Mohamed, "Temperature dependence of the free volume in polytetrafluoroethylene studied by positron annihilation spectroscopy", Radiation Physics and Chemistry 76, 160-4, 2007.
- 2. E. E. Abdel-Hady, **Hamdy F. M. Mohamed** and Somia S. Fareed, "Free volume evolution in polyoxymethylene studied by positron annihilation spectroscopy", Radiation Physics and Chemistry 76, 138-41, 2007.
- 3. **Hamdy F. M. Mohamed**, M. Abd El-Hady and E. E. Abdel-Hady, "Radiation effect on positronium formation in solid state nuclear track detector", Applied Radiation and Isotopes 65, 328-34, 2007.
- 4. **Hamdy F. M. Mohamed,** Junhyun Kwon, Yong-Min Kim and Whungwhoe Kim, "Vacancy-type defects in clod-worked iron studied using positron annihilation techniques' Nuclear Instrument and Methods in Physics Research B 258, 429-34, 2007.
- 5. J Kwon, **Hamdy F. M. Mohamed**, Y-M. Kim and W. Kim, "Positron annihilation study and computational modeling of defect production in neutron-irradiated reactor pressure vessel steels", Nuclear Instrument and Methods in Physics Research B 262, 255-60, 2007.
- 6. E. Abdel-Hady, **Hamdy F. M. Mohamed** and Somia S. Fareed, "Temperature dependence of the free volume holes in polyhydroxybutyrate biopolymer: A positron lifetime study", Phys. Stat. Sol. (c) 4, 3907-3911, 2007.
- 7. **Hamdy F. M. Mohamed**, E. E. Abdel-Hady and Salwa S. Mohamed, "Irradiated polymethylemethacrylate studied by positron annihilation spectroscopy", Phys. Stat. Sol. (c) 4, 3722-6, 2007.

- 1. **Hamdy F. M. Mohamed** "Coincidence Doppler broadening spectroscopy in polyvinyl chloride after doping with Al₂O₃", Journal of Applied Polymer Science 108, 1307-13, 2008.
- 2. M.A. Ali, **Hamdy F. M. Mohamed** and W. M. Amer," Biophysical measurements of lead in some bioindicator plants" Romanian J. Biophys. 18, 57–66, 2008.
- 3. **Hamdy F. M. Mohamed**, K. Ito, Y. Kobayashi, N. Takimoto, Y. Takeoka and A. Ohira, "Free volume and permeabilities of O₂ and H₂ in Nafion membranes for polymer electrolyte fuel cells", Polymer 49, 3091–7, 2008.
- 4. Y. Kobayashi, K. Ito, T. Oka, C. He, **Hamdy F. M. Mohamed**, R. Suzuki and T. Ohdaira, "Application of positron beams to the study of positronium-forming solids", Applied Surface Science 255, 174-8, 2008.

5. **Hamdy F. M. Mohamed**, A. Ohira and Y. Kobayashi, "Free volume and oxygen permeability in polymers related to polymer electrolyte full cells", Materials Science Forum 607, 58-60, 2008.

2009:

- 1. **Hamdy F. M. Mohamed**, Y. Kobayashi, C. S. Kuroda and A. Ohira, "Effects of ion-exchange on free volume and oxygen permeation in Nafion for fuel cells", The Journal of Physical Chemistry B 113, 2247-52, 2009.
- 2. Y. Kobayashi, **Hamdy F. M. Mohamed** and A. Ohira, "Positronium formation in aromatic polymer electrolytes for fuel cells", The Journal of Physical Chemistry B 113, 5698-701, 2009.
- 3. Yong-Min Kim, Junhyun kwon, **Hamdy F. M. Mohamed**, Moon Joo Hyun and Changsun Kang, "Experimental study on the element-specific positron annihilation spectroscopy", Journal of the Korean Physical Society 54, 2382-9, 2009.
- 4. Yasuo Ito, **Hamdy F. M. Mohamed**, Victor P. Shantarovich and Takenori Suzuki, "Vacancy spectroscopy using positronium –What are we looking at by positronium in polymers—", Maku Membrane 34, 164-78, 2009.
- 5. E. E. Abdel-Hady, **Hamdy F. M. Mohamed** and M. R. M. El-Sharkawy, "Temperature effect on free volume of polymethylpentene studied by positron annihilation technique", Phys. Stat. Sol. C 6, 2420-2, 2009.
- 6. **Hamdy F. M. Mohamed**, Y. Kobayashi, C. S. Kuroda and A. Ohira, "Positron annihilation study of ion-exchanged forms of Nafion® membrane", Phys. Stat. Sol. C 6, 2392-6, 2009.

2010:

- Hamdy F. M. Mohamed, Y. Kobayashi, C. S. Kuroda, N. Takimoto and A. Ohira, "Free volume, oxygen permeability, and uniaxial compression storage modulus of hydrated biphenol-based sulfonated poly(arylene ether sulfone)", Journal of Membrane Sceince 360, 84-9, 2010.
- 2. **Hamdy F. M. Mohamed**, Y. Kobayashi, C. S. Kuroda and A. Ohira, "Free volume and gas permeation in ion-exchanged forms of the Nafion® membrane", Journal of Physics: Conference Series 225, 012038, 2010.

2011:

1. **Hamdy F. M. Mohamed**, Y. Kobayashi, C. S. Kuroda and A.Ohira, "Impact of heating on the structure of perfluorinated polymer electrolyte membranes: A positron annihilation study", Macromolecular Chemistry and Physics 212, 708-14, 2011.

- 1. **Hamdy F. M. Mohamed**, Y. Kobayashi, S. Kuroda and A. Ohira, "Positron trapping and possible presence of SO₃H clusters in dry fluorinated polymer electrolyte membranes", Chemical Physics Letters 544, 49-52, 2012.
- 2. A. Ohira, S. Kuroda and **Hamdy F. M. Mohamed**, "A study on structural property of ionomer as a model for catalyst layer: relationship between thickness and proton conduction for ionomer thin film on different substrate", ECS Transactions 50, 993-1001, 2012.

- Y. Kobayashi, M. Yamawaki, T. Oka, S. Saiki, Hamdy F. M. Mohamed, K. Hattori and Y. Watanabe, "Positron lifetimes and mechanical properties of gamma-irradiated ultra high molecular weight polyethylene", Materials Science Forum 733, 147-50, 2013.
- 2. **Hamdy F. M. Mohamed,** S. Kuroda, Y. Kobayashi, B. Tavernier, R. Suzuki and A. Ohira, "Study of thin Nafion® films for fuel cells using energy variable slow positron annihilation spectroscopy", Materials Science Forum 733, 57-60, 2013.
- 3. **Hamdy F. M. Mohamed,** Y. Kobayashi, S. Kuroda and A. Ohira, "Positronium lifetimes and gas permeation in Aquivion® for fuel cells", Materials Science Forum 733, 61-4, 2013.
- 4. **Hamdy F. M. Mohamed,** S. Kuroda, Y. Kobayashi, N. Oshima, R. Suzuki and A. Ohira, "Possible presence of hydrophilic SO₃H nanoclusters on the surface of dry ultrathin Nafion® films: a positron annihilation study", Physical Chemistry Chemical Physics 15, 1518-25, 2013.
- Akihiro Ohira, Seiichi Kuroda, Hamdy F. M. Mohamed and Bruno Tavernier, "Effect of interface on surface morphology and proton conduction of polymer electrolyte thin films", Physical Chemistry Chemical Physics 15, 11494-500, 2013.

2014:

- T. Kavetskyy, V. Tsmots, A. Kinomura, Y. Kobayashi, R. Suzuki, Hamdy F. M. Mohamed,
 O. Sauša, V. Nuzhdin, V. Valeev, and A. L. Stepanov, "Structural defects and positronium formation in 40 keV B⁺-implanted polymethylmethacrylate", The Journal of Physical Chemistry B 118, 4194-200, 2014.
- Y. Kobayashi, Shingo Kazama, K. Inoue, T. Toyama, Y. Nagai, K. Haraya, Hamdy F. M. Mohamed, B. E. O'Rouke, N. Oshima, A. Kinomura, and R. Suzuki, "Positron annihilation in cardo-based polymer membranes", The Journal of Physical Chemistry B 118, 6007-6014, 2014.

2015:

1. **Hamdy F. M. Mohamed**, E. E. Abdel-Hady and A. Ohira, "Per-fluorinated sulfonic acid/PTFE copolymer studied by positron annihilation lifetime and gas permeation

techniques", Journal of Physics: Conference Series 618, 012031, 2015.

2016:

 Y. Kobayashi, A. Kinomura, S. Kazama, K. Inoue, T. Toyama, Y. Nagai, K. Haraya, Hamdy F. M. Mohamed, B. E. O'Rouke, N. Oshima, and R. Suzuki, "Hole size distributions in cardo-based polymer membranes deduced from the lifetimes of orthopositronium", Journal of Physics: Conference Series 674, 012017, 2016.

2017:

- 1. Karim Menoufi, **Hamdy F. M. Mohamed**, Ahmed A. Farghali, Mohamed H. Khedr, "Dust accumulation on photovoltaic panels: A case study at the East Bank of the Nile (Beni-Suef, Egypt)", Energy Procedia 128, 24-31, 2017.
- 2. **Hamdy F.M. Mohamed**, E.E. Abdel-Hady and M.O. Abdel-Hamed, "Proton conductivity and free volume properties in per-fluorinated sulfonic acid/PTFE copolymer for fuel cell", Acta Physica Polonica A 312, 1509-1514, 2017.
- 3. **Hamdy F. M. Mohamed**, E.E. Abdel-Hady, M.O. Abdel-Hamed and Michael Said "Microstructure characterization of Nafion HP JP as a proton exchange membrane for fuel cell: positron annihilation study", Acta Physica Polonica A 132, 1543-1547, 2017.
- 4. Mahmoud M. Gomaa, Christoph Hugenschmidt, Marcel Dickmann, M.O. Abdel-Hamed, E. E. Abdel-Hady and **Hamdy F. M. Mohamed**, "Free volume of PVA/SSA proton exchange membrane studied by positron annihilation lifetime spectroscopy", Acta Physica Polonica A 132, 1519-1522, 2017.
- 5. Ebrahiem E. Ebrahiem, Nabila Shehata, **Hamdy F. M. Mohamed**, Taha L. Farag, and Gaber S. AbdelGhany, "Preparation and characterization of nano-activated carbon from agricultural waste for wastewater treatment: A review", Yanbu Journal of Engineering and Science 15, 17-37, 2017.

- 1. **Hamdy F. M. Mohamed** and Ahmed Owais, "Tracking free volume changes in bisphenolabased polycarbonate sheets after treatment with liquid Acetone", Journal of Polymer Research 25, 28-1-28-8, 2018.
- 2. Ameen Abdelrahman, Hassan A. Dosky, **Hamdy F. M. Mohamed**, Aly M. Radwan and Asmaa S. Hamouda, "Studying and evaluating sustainable materials for converting plastic waste to fuel", Energy and Environment Research 8, 73-90, 2018.
- 3. Mahmoud M. Gomaa, Christoph Hugenschmidt, Marcel Dickmann, Esam E. Abdel-Hady, **Hamdy F. M. Mohamed**, and Mohamed O. Abdel-Hamed, "Cross-linked PVA/SSA proton exchange membranes: correlation of physiochemical properties with the free volume

- determined by positron annihilation spectroscopy", Physical Chemistry Chemical Physics, 20, 28287-28299, 2018.
- 4. **Hamdy F. M. Mohamed**, E. E. Abdel-Hady, M. F. M. Hamamm, M. Ibrahim, H. Ahmed, M. Mondy, and H. Yehia, "A promising fuel cell catalyst using non-precious metal oxide", Materials Science and Engineering 464, 012002, 2018.
- 5. E. E. Abdel-Hady, **Hamdy F. M. Mohamed**, M. O. Abdel-Hamed and M. M. Gomaa, "Physical and electrochemical properties of PVA/TiO₂ nanocomposite membrane", Advances in Polymer Technology 37, 3842-3853, 2018.

- 1. T. Alharbi, **Hamdy F.M. Mohamed**, Yasser B. Saddeek, Ahmed Y. El-Haseib, and Kh S. Shaaban, "Study of the TiO₂ effect on the heavy metals oxides borosilicate glasses structure using gamma-ray spectroscopy and positron annihilation technique", Radiation Physics and Chemistry 164, 108345-1-1083451-7, 2019.
- 2. Michael S. A. Kamel, **Hamdy F. M. Mohamed**, M. O. Abdel-Hamed and E. E. Abdel-Hady, "Characterization and evaluation of Nafion HP JP as proton exchange membrane: transport properties, nanostructure, morphology, and cell performance", Journal of Solid State Electrochemistry 23, 2639-2656, 2019.

- Ashraf A. Ahmed, Gaber El-Saady, Karim Menoufi, Hamdy F. M. Mohamed, "Artificial neural based improved maximum power point tracking for PV water pumping system", International Journal of Advanced Science and Technology 29, 7315-7325, 2020.
- 2. **Hamdy F. M. Mohamed**, Howayda G. Taha, and H. B. Alaa, "Electrical conductivity and mechanical properties, free volume, and γ-ray transmission of ethylene propylene diene monomer/butadiene rubber composites", Polymer Composite 41, 1405-1417, 2020.
- 3. **Hamdy F. M. Mohamed**, E. E. Abdel-Hady, M. O. Abdel-Hamed and Michael S. A. Kamel, "Impact of ultraviolet radiation on the performance of polymer electrolyte membrane", Journal of Solid State Electrochemistry 24, 1217-1229, 2020.
- 4. Howayda G. Taha and **Hamdy F. M. Mohamed**, "Study of the nanostructure of γ-irradiated high-density polyethylene/carbon black composite and its durability as geomembrane", Polymers for Advanced Technologies 31, 1581-1590, 2020.
- Abd Elrahman Atta, Nabila Shehata, Hamdy F. M. Mohamed, and Mohamed R. Ali, "A
 novel merging solar parabolic collector with thermoelectric generator using geothermal
 energy", Accepted for the publication in the IOP Conference Series: Materials Science and
 Engineering, 2020.

6. Hossam B. Alaa, Hamdy F. M. Mohamed, and E. E. Abdel-Hady, "Thermal expansion of the free volume in poly(vinyl alcohol) using positron annihilation technique and group contribution method", accepted for publication on the Egyptian journal of Physics 2020.

B. PAPERS PUBLISHED/PRESENTED IN INTERNATIONAL AND LOCAL CONFERENCE PROCEEDINGS:

- 1. Y. Ito, **H. F. M. Mohamed**, T. Seguchi, A. Oshima, "Changes of the hole structures of radiation cross-linked and degraded polytetrafluoroethylenes", presented in the 4th Symposium of Research Center for Nuclear Science and Technology, The University of Tokyo, Dec. 4-5, 1995 (Tokyo, Japan).
- 2. **Hamdy F. M. Mohamed**, I. Masahiko, Y. Ito, "Study of crystallization process of poly(ethylene terephthalate) (specific density, x-ray diffraction, and positron annihilation)", presented in the 33rd Annual Meeting on Radioisotopes in Physical Science and Industries, July 1-3, 1996 (Tokyo, Japan).
- 3. Y. Ito, **Hamdy F. M. Mohamed**, K. Tanaka, K. Okamoto, "In-situ observation of sorption mechanism of CO₂ in polymer by positron annihilation ", presented in the 33rd Annual Meeting on Radioisotopes in Physical Science and Industries, July 1-3, 1996 (Tokyo, Japan).
- 4. Y. Ito, **Hamdy F. M. Mohamed**, "Study of electron scavenging reactions via inhibition and anti-inhibition effects on positronium formation", presented in the 40th Japan Radiation Chemistry Symp., Oct. 15-17, 1996 (Tsukuba, Japan).
- 5. Y. Ito, **Hamdy F. M. Mohamed**, "The gas sorption mechanism in polymers studied by positron annihilation", presented in the 40th Japan Nuclear Chemistry Symp., Oct. 22-24, 1996 (Wako, Japan).
- 6. **Hamdy F. M. Mohamed,** Y. Ito, "On the unstable o-Ps states in low molecular weight organic solids", presented in the Short Workshop in Solid State Physics, The University of Tokyo, Dec. 2-3, 1996 (Tokyo, Japan).
- 7. Y. Ito, **Hamdy F. M. Mohamed**, "Unstable o-Ps states in the solids of low molecular weight organic compounds", presented in the 11th International Conference on Positron Annihilation, May 25-30, 1997 (Kansas City, USA).
- 8. **Hamdy F. M. Mohamed**, E. E. Abdel-Hady, A. M. A. El-Sayed, "On the thermal expansion of the holes measured by ortho-positronium lifetimes", presented in the Nuclear and Particle Physics Conference, Nov. 15-19, 1997 (Cairo, Egypt).
- 9. A. T. Mohamed, A. M. A. El-Sayed, Hamdy F. M. Mohamed, "Positron annihilation

- lifetimes in compacted iron powder", presented in the Nuclear and Particle Physics Conference, Nov. 15-19, 1997 (Cairo, Egypt).
- 10. E. E. Abdel-Hady, **Hamdy F. M. Mohamed**, "Free volume hole properties of polymer probed by positron annihilation spectroscopy", presented in the 3rd Conference on Nuclear and Particle Physics, Oct. 20-24, 2001 (Cairo, Egypt).
- 11. **Hamdy F. M. Mohamed,** N. S. Abd El-Aziz, "Study the copolymerization of styrene-sodium styrene sulphonate using positron annihilation lifetime technique", presented in the 6th Radiation Physics Conference, Oct. 27-30, 2002 (Assiut, Egypt).
- 12.E. G. Miller, W. E. Kauppila, C. K. Kwan, **Hamdy F. M. Mohamed**, K. Pipinos and T. S. Stein, "Towards absolute positronium formation cross-section measurements in inert gases", presented in the 33th Meeting of the Division of Atomic, Molecular, and Optical Physics (DAMOP 2002) May 28–June 1, 2002 (Williamsburg, Virginia, USA).
- 13. **Hamdy F. M. Mohamed**, M. Abd El-Hady, E. E. Abdel-Hady, "Radiation effect on positronium formation in solid state nuclear track detector", presented in the 4th Conference on Nuclear and Particle Physics Oct. 11-15, 2003 (Fayoum, Egypt).
- 14. **Hamdy F. M. Mohamed**, E. E. Abdel-Hady, M. H. Abd-Elsalam, "Temperature dependence of wheat hay on carbon black loaded EPDM composite studied by positron annihilation techniques", presented in the Environmental Physics Conference, Feb. 24-28, 2004 (El-Minia, Egypt).
- 15. E. E. Abdel-Hady, Hamdy F. M. Mohamed, M. H. Abd-El Salam, "Temperature effect on carbon black loaded EPDM composite studied by positron annihilation lifetime spectroscopy", presented in the 7th Radiation Physics Conference, Nov. 29-30, 2004 (Ismailia, Suez Canal, Egypt).
- 16. Hamdy F. M. Mohamed, E. E. Abdel-Hady, Salwa S. Mohmaed, "A Study of pure and doped polytetrafluoroethyleneusing Doppler broadening positron annihilation spectroscopy", presented in the 7th Radiation Physics Conference, Nov. 29-30, 2004 (Ismailia, Suez Canal, Egypt).
- 17. **Hamdy F. M. Mohamed**, E. E. Abdel-Hady, Salwa S. Mohamed, "Microstructure analysis of the effect of glass on polytetrafluoroethylene by positron annihilation spectroscopy", presented in the XXV Conference on Solid State Physics and Materials Science & Workshop on Photonic Materials and Optoelectronic Devices (II), March 6-10, 2005 (Luxor, Egypt).
- 18. E. Abdel-Hady, **Hamdy F. M. Mohamed**, Somia S. Farid, "Positron lifetime as a nanoprobe for free volume distribution in polyoxymethylene-copolymer", presented in the

- XXV Conference on Solid State Physics and Materials Science & Workshop on Photonic Materials and Optoelectronic Devices (II), March 6-10, 2005 (Luxor, Egypt).
- 19. **Hamdy F. M. Mohamed**, "Positron annihilation spectroscopy in materials structure studies", presented in the International Symposium on Industrial Safety, Research Institute of Industrial Science and Technology, CBNU, Chungbuk National University, April 14, 2006 (Chungbuk, Korea).
- 20. J. Kwon, Hamdy F. M. Mohamed, Y. Kim, W. Kim, "Positron annihilation lifetime spectroscopy of vacancy-type defects in cold-worked iron", presented in the Proceeding of the Transactions of the Korean Nuclear Society Spring Meeting, May 25-26, 2006 (Chuncheon, Korea).
- 21. **Hamdy F. M. Mohamed**, Y. Kobayashi, A. Ohira, Y. Takeoka, "Positron Annihilation Lifetime Study of Sulfonated Polyethersulfone Polymers", The Proceeding of the 50th Japan Radiation Chemistry Symposium, Oct. 10-12, 2007 (Kyoto University, Japan).
- 22. **Hamdy F. M. Mohamed**, K. Ito, Y. Kobayashi, N. Takimoto, Y. Takeoka, A. Ohira "Free volume of nafion membranes for fuel cells studied by the positron annihilation lifetime technique", presented in the International symposium on charged particle and Photon Interactions with matter (ASR2007) November 6-9, 2007 (Tokai, Japan).
- 23. **Hamdy F. M. Mohamed**, K. Ito, Y. Kobayashi, N. Takimoto, Y. Takeoka, A. Ohira, "Positron Annihilation Study of Nafion Membrane for Fuel Cells", presented in the Specialist Meeting on Positron Science and its Application to Science and Engineering, Nov. 16-17, 2007 (Osaka, Japan).
- 24. A. Ohira, N. Takimoto, **Hamdy F. M. Mohamed**, L. Wu, Y. Kobayashi, and Y. Takeoka "Morphological features of proton exchange membranes related to Proton conductivity and gas permeability", presented in the 42nd IUPAC World Polymer Congress (MACRO 2008), Taiwan, June 29- July 4, 2008.
- 25. A. Ohira, N. Takimoto, **Hamdy F. M. Mohamed**, L. Wu, Y. Kobayashi, and Y. Takeoka "Morphological properties of proton exchange membranes related to proton conduction and gas permeability", Polymer Prepr., Am. Chem. Soc., Div. Fuel Chem. 53, 788-790, 2008.
- 26. **Hamdy F. M. Mohamed**, L. Wu, A. Ohira, Y. Kobayashi, "Nafion membranes for fuel cells studied by using the positron annihilation technique", presented in the 2nd Asia-Pacific Symposium on Radiation Chemistry (APSRC-2008), August 29-September 1, 2008 (Waseda University, Tokyo, Japan).
- 27. **Hamdy F. M. Mohamed,** Y. Kobayashi, A. Ohira, "Gases permeability and free volume in SBPSH membranes for polymer electrolyte fuel cells", prsented in the Proceeding of the 51st

- Japan Radiation Chemistry Symposium, Oct. 15-17, 2008 (Tsukuba, Japan).
- 28. **Hamdy F. M. Mohamed,** Y. Kobayashi, C. S. Kuroda, A. Ohira, "Positron Annihilation Study of Ion-exchanged Nafion® Membrane for Fuel Cells", presented in the Specialist Meeting on Positron Science and its Application to Science and Engineering, December 5-6, 2008 (Osaka, Japan).
- 29.Y. Kobayashi, **Hamdy F. M. Mohamed**, A. Ohira, "Positronium Formation in Aromatic Polymer Electrolytes for Fuel Cells", presented in the 46th Isotopes and Radiations Symposium, June-2009 (Tokyo, Japan).
- 30. **Hamdy F. M. Mohamed**, Y. Kobayashi, A. Ohira, "Free volume and gas permeation in a perfluorinated polymer electrolyte membrane for fuel cells" presented in Polymer Preprints, Japan 58th SPSJ Symposium on Macromolecules, pp. 5626-5626, 2009.
- 31. **Hamdy F. M. Mohamed**, Y. Kobayashi, and A. Ohira, "Free volume and oxygen permeation in ion-exchange forms of Nafion membrane for fuel cells" presented in the Polymer Preprints, Japan 58th SPSJ Annual Meeting, pp. 801-801, 2009.
- 32. **Hamdy F. M. Mohamed**, Y. Kobayashi, C. S. Kuroda, A. Ohira, "Correlation between free volume and oxygen permeation in ion-exchanged nafion membranes for fuel cells", The Proceeding of the 52th Japan Radiation Chemistry Symposium, September 24-26, 2009 (Fukui University, Japan).
- 33. **Hamdy F. M. Mohamed**, Y. Kobayashi, C. S. Kuroda, A. Ohira, "Free volume and gas permeation in ion-exchanged forms of the Nafion® membrane", presented in the Advanced Science Research Symposium 2009 (ASR2009) ~ Positron, Muon and other exotic particle beams for material and atomic/molecular sciences ~ 10-12 November 2009 (Techno Community Square Riccoti, Japan).
- 34. **Hamdy F. M. Mohamed**, Y. Kobayashi, A. Ohira, "Free volume and oxygen permeation in Ion-exchanged Nafion®", presented in the 11th Pacific Polymer Conference (PPC11), 6-10 December 2009 (Cairns, Australia).
- 35. **Hamdy F. M. Mohamed,** C. S. Kuroda, Y. Kobayashi, A. Ohira, "Structural Changes in Perfluorinated Polymer Electrolyte Studied by Positron Annihilation", presented in the 47th Annual Meeting on Radioisotope and Radiation Research, July 7 9, 2010 (Odaiba, Japan).
- 36. **Hamdy F. M. Mohamed**, C. S. Kuroda, Y. Kobayashi, R. Suzuki, and A. Ohira, "Free volume of thin films of Nafion® for fuel cells obtained from energy variable slow positron annihilation spectroscopy", presented in The 59th SPSJ Annual Meeting, pp.4660-4660, 2010.
- 37. A. Ohira, N. Takimoto, C. S. Kuroda, K. Kidena, T. Ohkubo, Hamdy F. M. Mohamed, Y.

- Kobayashi, Y. Takeoka, M. Rikukawa, "Correlation with Structure and Mass Transport property in Polymer Electrolyte Membrane", presented in 218th ECS Meeting, The Electrochemical Society, pp. 913-913, 2010.
- 38. **Hamdy F. M. Mohamed** "Application of positron annihilation to the characterization of polymer electrolyte membranes for fuel cell", presented in the Korean Atomic Energy Research Institute (KAERI), September 12, 2010 (Daejeon, Republic of Korea).
- 39. **Hamdy F. M. Mohamed,** C. S. Kuroda, Y. Kobayashi, A. Ohira, "Free volume and oxygen permeability of hydrated biphenol-based sulfonated poly(arylene ether sulfone)", presented in the 59th SPSJ Symposium on Macromolecules, September 15-17, 2010 (Hokkaido University, Sapporo, Japan).
- 40.**Hamdy F. M. Mohamed**, Y. Kobayashi, A. Ohira, "Positron Annihilation in Sulfonated Polyethersulfone for Fuel Cells", presented in the 53rd Radiation Chemistry Symposium September 21-22, 2010 (Nagoya, Japan).
- 41. **Hamdy F. M. Mohamed,** C. S. Kuroda, Y. Kobayashi, B. Tavernier, R. Suzuki, A. Ohira, "Free volume of thin films of Nafion for fuel cells obtained from energy variable slow positron annihilation spectroscopy" presented in the Positron Science and Applications, November 26-27, 2010 (Kyoto University, Japan).
- 42. **Hamdy F. M. Mohamed**, S. Kuroda, Y. Kobayashi, R. Suzuki, A. Ohira, "Characterization of Nafion® thin films by slow positron beam", presented in the 60th SPSJ Annual Meeting, May 25 27, 2011 (Osaka, Japan).
- 43. **Hamdy F. M. Mohamed,** Seiichi Kuroda, Yoshinori Kobayashi, Ryoichi Suzuki, Akihiro Ohira, "Nanostructure of Nafion thin films studied by slow positron beams", presented in the Polymer Preprints, Japan 60th SPSJ Symposium on Macromolecules, pp.3278-3278, 2011.
- 44. **Hamdy F. M. Mohamed**, S. Kuroda, Y. Kobayashi, R. Suzuki, A. Ohira, "Study of Nafion® Thin Films by Slow Positron Beam", presented in the 48th Annual eeting on Radioisotope and Radiation Research, July 6-8, 2011 (Odaiba, Japan).
- 45.Y. Kobayashi, M. Yamawak, T. Oka, S. Saiki, **Hamdy F. M. Mohamed**, K. Hattori, Y. Watanabe, "Positron lifetimes and mechanical properties off gamma-irradiated ultra high molecular weight polyethylene" presented in the 54th Radiation Chemistry Meeting, September 28, 2011 (Osaka University, Japan).
- 46. **Hamdy F. M. Mohamed**, S. Kuroda, Y. Kobayashi, R. Suzuki, A. Ohira, "Slow positron beams study of Nafion® ultrathin films", presented in the 15th International Symposium, on Batteries, Fuel Cells and Capacitors Oct. 17-20, 2011 (Tokyo, Japan).

- 47.S. Kuroda, **Hamdy F. M. Mohamed**, A. Ohira, "Structural analysis of Nafion thin films by AFM", presented in the 15th International Symposium, on Batteries, Fuel Cells and Capacitors Oct. 17-20, 2011 (Tokyo, Japan).
- 48. **Hamdy F. M. Mohamed**, S. Kuroda, Y. Kobayashi, R. Suzuki, A. Ohira, "Characterization of ultrathin film of Nafion® by energy variable slow positron annihilation spectroscopy", presented in the Positron Science and Applications, December 2-3, 2011 (Kyoto University, Japan).
- 49. **Hamdy F. M. Mohamed,** S. Kuroda, Y. Kobayashi, N. Oshima, R. Suzuki, A. Ohira, "Positron annihilation spectroscopy study of nanostructure in Nafion® thin films", presented in the 61st SPSJ Annual Meeting, May 29 31, 2012 (Yokohama, Japan).
- 50.A. Ohira, S. Kuroda, M. Yamaguchi, M. A. Barique, **Hamdy F. M. Mohamed**, "Study on structural property of ionomer as a model for catalyst layer", presented in the Electrochemical Society meeting, June 2012 (USA).
- 51.Y. Kobayashi, **Hamdy F. M. Mohamed,** S. Kuroda, A. Ohira, "Structure of Polymer Electrolyte Membranes for Fuel Cells Studied by Positrons", presented in the 49th Annual Meeting of Radioisotopea and Radiation Research, July 9-11, 2012 (Tokyo, Japan).
- 52.**Hamdy F. M. Mohamed,** Y. Kobayashi, S. Kuroda, A. Ohira, "Positron trapping and possible presence of SO₃H clusters in dry fluorinated polymer electrolyte membranes", presented in the 61st Symposium on Macromolecules September 19 21, 2012 (Nagoya, Japan).
- 53. **Hamdy F. M. Mohamed,** S. Kuroda, Y. Kobayashi, N. Oshima, R. Suzuki, A. Ohira, "Investigation of NAFION® Thin Films by Positron Annihilation Spectroscopy and Other Techniques", presented in the 55th Radiation Chemistry Symposium, September 26-28, 2012 (Sandi, Japan).
- 54. **Hamdy F. M. Mohamed** "Positron annihilation spectroscopy study of nanostructure in Nafion® thin films" presented in the 1st China-Japan Joint Workshop on Positron Science, October 16-18, 2012 (Wuhan University, Wuhan, China).
- 55. **Hamdy F. M. Mohamed,** S. Kuroda, Y. Kobayashi, N. Oshima, R. Suzuki, A. Ohira, "Characterization of Nafion® thin films on substrates by positron annihilation spectroscopy and other techniques", presented in the 53rd Battery Symposium in Japan and the 16th International Symposium on Batteries, Fuel Cells and Capacities (ISBFCC-16), November 14-15, 2012 (Fukuoka, Japan).
- 56. M. O. Abdel-Hamed, E. E. Abdel-Hady, **Hamdy F. M. Mohamed** and M. M. Gomaa "Characterization of poly(ethylene terephthalate) based proton conducting membrane for

- fuel cell" presented in the 2nd International Conference on Advanced Basic & Applied Sciences (ABAS II), April 2-4, 2014 (Sokhna, Egypt).
- 57. **Hamdy F. M. Mohamed**, E. E. Abdel-Hady, M. O. Abdel-Hamed, A. Ohira, Aya H. Mohamed, "Positron Annihilation Study of Perfluorinated Ionomer Membranes for Fuel Cells", presented in the 5th Asian Pacific Symposium on Radiation Chemistry (APSRC 2014), September 8-11, 2014 (Tokyo, Japan).
- 58. **Hamdy F. M. Mohamed**, E. E. Abdel-Hady, M. O. Abdel-Hamed, M. M. Gomaa, H. B. Alaa and Aya H. Mohamed, "Study of Polymer Electrolyte Membranes (PEMs) for Fuel Cell using Positron Annihilation Spectroscopy", presented in the 6th Environmental Physics Conference, 20-24 September 2014 (Hurghada, Egypt).
- 59. E. E. Abdel-Hady, H. B. Alaa, **Hamdy F. M. Mohamed**, M. O. Abdel-Hamed, M. M. Gomaa, "Positron annihilation study of polyethyleneterephthalate based proton conducting membrane for fuel cells", presented in the 6th Environmental Physics Conference, 20-24 September 2014 (Hurghada, Egypt).
- 60. E. E. Abdel-Hady, **Hamdy F.M. Mohamed**, M. M. Osman, Aya H. Mohamed, "The effect of UV irradiation on per-fluorinated sulfonic acid/PTFE copolymer for fuel cell", presented in the 3nd International Conference on Advanced Basic & Applied Sciences (ABAS III), November 17-20, 2015 (Hurghada).
- 61. E. E. Abdel-Hady, Hamdy F.M. Mohamed, M. M. Osman, Aya H. Mohamed, "The effect of UV irradiation on per-fluorinated sulfonic acid/PTFE copolymer for fuel cell", presented in the 3rd International Conference of Advanced Applied Sciences (ICAS-III), November 17-20, 2015 (Hurghada, Egypt).
- 62. T. Kavetskyy, K. Iida, Y. Nagashima, A. Kuczumow, A. Kinomura, Y. Kobayashi, R. Suzuki, **Hamdy F. M. Mohamed**, O. Šauša, V. Nuzhdin, V. Valeev, A.L. Stepanov, "Highdose boron and silver ion implantation into PMMA probed by slow positrons: Comparison between effects of carbonization and formation of metal nanoparticles" presented in the 14th International Workshop on Slow Positron Beam Techniques & Applications, May 22-27, 2016 (Matsue, Japan).
- 63. E. Abdel-Hady, **Hamdy F. M. Mohamed**, M. O. Abdel-Hamed, M. M. Gomaa, "Preparation and characterization of PVA/TiO₂ nanocomposite membrane for fuel cell applications", presented in the 3rd International Conference on Nanotechnology, Nanomaterials & Thin Films for Energy Applications" (NANOENERGY 2016), University of Liverpool, July 27-29, 2016 (UK).

- 64. **Hamdy F. M. Mohamed**, E. E. Abdel-Hady, M. O. Abdel-Hamed, Michael Said "Characterization of Nafion HP as a proton exchange membrane for fuel cell applications", presented in the 3rd International Conference on Nanotechnology, Nanomaterials & Thin Films for Energy Applications" (NANOENERGY 2016), University of Liverpool, July 27-29, 2016 (UK).
- 65. H. B. Alaa, E. E. Abdel-Hady, **Hamdy F. M. Mohamed**, "Correlation between free volume and electrical conductivity in pure and doped polyvinyl chloride with Al₂O₃", presented in the 7th Environmental Physics Conference (EPC'16), September 24-27, 2016 (Sharm E-Sheikh, Egypt).
- 66. M. O. Abdel-Hamed, **Hamdy F. M. Mohamed**, E. E. Abdel-Hady, and Michael Said, "study of some properties of Nafion HP for fuel cell applications", presented in the 7th Environmental Physics Conference (EPC'16), September 24-27, 2016 (Sharm E-Sheikh, Egypt).
- 67. **Hamdy F. M. Mohamed**, E. E. Abdel-Hady, M. O. Abdel-Hamed "Correlation between free volume and proton conductivity of Fumapem® for fuel cells", presented in the 7th Environmental Physics Conference (EPC'16), September 24-27, 2016 (Sharm E-Sheikh, Egypt).
- 68. E. E. Abdel-Hady, M. O. Abdel-Hamed, **Hamdy F. M. Mohamed**, M. M. Gomaa, "Effect of sulfosuccinic acid on the performance of poly (vinyl alcohol) membrane for fuel cell applications", presented in the 7th Environmental Physics Conference (EPC'16), September 24-27, 2016 (Sharm E-Sheikh, Egypt).
- 69. **Hamdy F. M. Mohamed,** E. E. Abdel-Hady, M. O. Abdel-Hamed and M. M. Gomaa, "Preparation and Characterization of PVA/TiO₂ Nanocomposite Membrane for Alkaline Direct Methanol Fuel Cell", presented in the The 1st International Conference on Natural Resources and Renewable Energy (ICNRRE-1), April 17-20, 2017 (Hurghada, Egypt).
- 70. E. E. Abdel-Hady, **Hamdy F. M. Mohamed**, M. Ibrahim, H. Ahmed, M. Mondy, H. Yehia, "A non-precious fuel cell catalyst using a metal oxide nanoparticle", presented in the 10th Conference on Nuclear and Particle Physics (NUPPAC'7), October 7-10, 2017 (Hurghada, Egypt).
- 71. **Hamdy F. M. Mohamed**, E. E. Abdel-Hady, Hamed-M.O. Abdel, H. B. Alaa, Michael Said "Preparation and evaluation of Nafion HP JP as an energy materials", presented in the 10th Conference on Nuclear and Particle Physics (NUPPAC'7), October 7-10, 2017 (Hurghada, Egypt).
- 72. Michael Said, Hamdy F. M. Mohamed, E. E. Abdel-Hady, Hamed-M.O. Abdel, "Free

- volume and transport properties for Nafion HP JP", presented in the 10th Conference on Nuclear and Particle Physics (NUPPAC'7), October 7-10, 2017 (Hurghada, Egypt).
- 73. M. O. Abdel-Hamed, E.E. Abdel-Hady, **Hamdy F.M. Mohamed**, M. F. M. Hmamm, "Structure, morphology and catalytic activity of PAN/PVP nanofibers loaded with cobalt nanoparticles", presented in the 4th International Conference of Advanced Applied Sciences (ICAS4), November 7-10, 2017 (Hurghada).
- 74. E. E. Abdel-Hady, **Hamdy F. M. Mohamed**, Hamed-M.O. Abdel, H. B. Alaa, Michael Said, "Nafion HP JP as a Proton Exchange Membrane: Characterization, Electrochemical, Transport Properties and Nanostructure", presented in the 4th International Conference of Advanced Applied Sciences (ICAS4), November 7-10, 2017 (Hurghada).
- 75. E. E. Abdel-Hady, **Hamdy F. M. Mohamed**, M. O. Abdel-Hamed, M. M. Gomaa, "Positron Annihilation Studies on Chemically Synthesized of PVA/TiO2 Nanocomposite Membrane", Presented in the First International Conference on Particles, Materials and Energy: Advanced Medical and Industrial Applications, December 2-6, 2018 (Luxor, Egypt).
- 76. **Hamdy F. M. Mohamed**, Howayda G. Taha, "Radiation Effect on Free Volume and Electrical Conductivity in Ethylene Propylene Diene Monomer Doped with Bytadiene Rubber", presented in the First International Conference on Particles, Materials and Energy: Advanced Medical and Industrial Applications, December 2-6, 2018 (Luxor, Egypt).
- 77. **Hamdy F. M. Mohamed**, E. E. Abdel-Hady, M. O. Abdel-Hamed, M. Said, "The effect of Ultra-Violet radiation on Nafion 112 proton exchange membrane for fuel cell applications", presented in the First International Conference on Particles, Materials and Energy: Advanced Medical and Industrial Applications, December 2-6, 2018 (Luxor, Egypt).
- 78. M. O. Abdel-Hamed, E. E. Abdel-Hady, **Hamdy F. M. Mohamed**, M. F. M. Hammam, "Electro-catalytic oxidation of methanol on Ni supported by carbonized PVP nanofibers", presented in the First International Conference on Particles, Materials and Energy: Advanced Medical and Industrial Applications, December 2-6, 2018 (Luxor, Egypt).
- 79. E. E. Abdel-Hady, **Hamdy F. M. Mohamed**, M. O. Abdel-Hamed, M. F. M. Hammam, "Ternary Nanocomposites as Nonprecious Electrocatalyst for Ethanol and Methanol Oxidation in Alkaline Electrolyte", presented in the First International Conference on Particles, Materials and Energy: Advanced Medical and Industrial Applications, December 2-6, 2018 (Luxor, Egypt).
- 80. Asmaa S. Hamouda, Paltu Acharjee, Ameen Abdelrahman, A. M. Radwan, A.H. Zaki, A. Farghali, **Hamdy F. M. Mohamed**, Anshu Yadav, Anubhuti Bhatnagar, Avishek Goel,

- "Catalytic thermochemical cracking of polyethylene over nanocomposite bentonite clay" presented in the fifth International Conference of Advanced Applied Sciences (ICAS4), November 9-12, 2019 (Hurghada, Egypt).
- 81. Mahmoud M. Gomaa, Christoph Hugenschmidt, Marcel Dickmann, Esam E. Abdel-Hady, **Hamdy F. M. Mohamed**, Mohamed O. Abdel-Hamed, "Study the atomic scale nanostructure of the fuel cell membrane" presented in the fifth International Conference of Advanced Applied Sciences (ICAS4), November 9-12, 2019 (Hurghada, Egypt).
- 82. **Hamdy F. M. Mohamed**, E. E. Abdel-Hady, M. O. Abdel-Hamed, Michael S. A. Kamel, "Improvement of perfluorosulfonic acid membrane by UV-irradiation for polymer electrolyte fuel cell performance", presented in the fifth International Conference of Advanced Applied Sciences (ICAS4), November 9-12, 2019 (Hurghada, Egypt).
- 83. **Hamdy F. M. Mohamed**, Howayda G. Taha, H. B. Alaa, "Characterization of radiation effects in ethylene propylene diene monomer/Butadiene rubber composites for radiation safety", presented in the fifth International Conference of Advanced Applied Sciences (ICAS4), November 9-12, 2019 (Hurghada, Egypt).
- 84. Gaber S. AbdelGhany, Ibrahiem E. Ibrahiem, **Hamdy F. M. Mohamed**, Nabila Shehata, "Investigation of Fe and Cr adsorption by rice husk activated carbon", presented in the fifth International Conference of Advanced Applied Sciences (ICAS4), November 9-12, 2019 (Hurghada, Egypt).
- 85. Abd Elrahman Atta, Mohamed R. Ali, Nabila Shehata, **Hamdy F. M. Mohamed**, "A novel merging solar parabolic collector with thermoelectric generator using geothermal energy", presented in the fifth International Conference of Advanced Applied Sciences (ICAS4), November 9-12, 2019 (Hurghada, Egypt).
- 86. Lobna A. Heikal, Walid M.I. Hassan, Asmaa S. Hamouda, **Hamdy F. M. Mohamed**, and Ahmed H. El-shazly, "Metal-organic frameworks for hydrogen storage and carbon capture: theoretical prospective", presented in the fifth International Conference of Advanced Applied Sciences (ICAS4), November 9-12, 2019 (Hurghada, Egypt).
