Name: MOHAMED Anwer Kamel RADY

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Faculty of Engineering, Helwan.
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Scientific Distinction

Qualifications

- **Ph. D.**, Mech. Engg., 1996, Indian Institute of Technology, Kharagpur, India. Thesis entitled "Studies on Natural Convection During Melting and Solidification of Metals and Alloys".
- **M. Sc.**, Mech. Power Engg., 1992, Cairo University, Egypt, Thesis entitled "A Simulation Model for Natural Circulation Solar Energy Water Heaters".
- **B. Sc.** in Mech. Power Engg., 1987, Menoufia University, Egypt, with grade excellent with honor degree, ***first graduate***.

Research Activities and International Recognition

- Multi-discipline research activities and scientific collaboration in EU funded projects with partners from HU, BU, France, Italy, Spain, Morocco, Jordan, etc.
- Research team member in more than 8 international research projects.
- More than 64 publications in international journals and conferences, please refer to list of publications at the end of this CV.
- Invited professor and researcher at reputed laboratories and research centers in France.
- More than 22 supervisions of M.Sc and Ph.D. thesis in Egypt and France.
- Reviewer for reputed international journals.
- Research Indices:

Citation indices	SCOPUS	Google Scholar	Research Gate
Citations	546	782	
h-index	15	16	
i10-index		21	
RG score			24.49
Data for 10 May, 2017			

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Research Interests

- Nanotechnology and advanced materials for energy, industrial, and environmental applications.
- Solar poly-generation plants
- Waste to energy conversion
- Multi-scale modeling for solidification processing (micro and macrosegregation during alloy solidification including convection effects).
- Heat and mass transfer in materials processing (phase change, ingot casting, continuous casting, surface treatment, etc.)
- Energy Modeling and optimization in Buildings.
- Natural and mixed convection with and without phase change.
- Cooling of electronic equipments (natural convection, jet impingement)
- Solar energy thermal systems (PCM energy storage)
- Alternative Diesel engine fuels (vegetable oils).
- Desiccant cooling systems

Supervision of Research Work, Master and Ph.D.

EGYPT:

1. A. Dawood, Experimental evaluation of Diesel engine performance and emission using blends of jojoba oil and Diesel fuel, M. Sc. Thesis, Benha High Institute of Technology, 2003.
2. A. Faris, Slot jet impingement air cooling of multiple heat sources, M. Sc. Thesis, Benha High Institute of Technology, 2000-2004.
3. H. Fawzi, Performance of air conditioning coils, M. Sc. Thesis, Benha High Institute of Technology, 2001-2003.
4. Abd Algalil. M., Study of Heat and fluid flow characteristics of gas turbine blades, M. Sc. Thesis, Benha High Institute of Technology, Benha University, 2007-2009.
5. Ibrahim Moustafa, Performance enhancement of household refrigerators using phase change materials, 2010-2013.
6. Mahmoud Said, Optimization of air conditioning system for data centers, 2012-2015.
7. Walid Elshaer, Advanced composite materials for thermal energy storage systems, Ph. D. Thesis, 2011-2013.
8. Sara Essam, Decision support models for waste to energy systems, M .Sc., Helwan University, 2013-2015.
9. Mena B., Analysis and numerical simulation of a multi-generation solar plant, M. Sc., French University in Egypt, 2013-2014.
10. Abeer, Analysis and numerical simulation of a solar driven small scale absorption system, M. Sc., French University in Egypt, 2013-2014.
11. M. Gammal, Self calibration of heliostat modules, M. Sc., Helwan University, 2015-2016.
12. Ahmed Sayed, Optimization of time step for solar tracking systems. M. Sc., Helwan University, 2015-2016.
13. M. Nagib, Optimization and control of single facet small heliostat, M. Sc., Helwan University, 2015-2016.
14. Mahomoud Alaa, Processing and characterization of ceramic foams for solar volumetric receivers, M. Sc. Helwan University, 2015-2016.
15. Mohamed Alaa, Optimization of high temperature solar receiver materials and configurations, Ph.D., UFE-Egypt, UPVD-France, 2015-2016.
16. Mohamed Attia, Spark Plasma Sintering of Nanocrystalline Yttria Ceramic for Optical Applications, Ph.D., 2012-2015, Helwan University, Egypt.

TREFLE/ENSCPB, Bordeaux, FRANCE:

1- Guillaume Novelli, Analyse numérique et expérimentale de la fusion d'un glaçon sphérique en présence de convection naturelle, Stage de recherche, Master Mécanique et Ingénieries, Université Bordeaux 1, 2003-2004.

2- Yoann Martchenko, Installation and calibration of data acquisition system for temperature measurement using a PC, application to ice melting in a cavity, Stage de recherche, TREFLE/ENSCPB, 2004.

3- Jean-Etienne Lemaire, Jet impingement cooling of electronic equipments, Master Mécanique et Ingénieries, Université Bordeaux 1, Rapport de étude bibliographique, 2004-2005.

4- Adrien Magni et Thierry Schwoertzig, Fusion d'un glaçon cylindrique dans une cavité axisymétrique en présence de convection naturelle, TER MATMECA, Mai 2005.

5- Vincent Morrison, Ph.D., TREFLE, Energy storage systems coupled with systems of electricity production using solar energy, 2004-2007.

6- Participation in the Ph. D. thesis work of Aurélie Maunoury, Simulation numérique de l'ascension d'une particule évolutive sous l'effet du changement d'état liquide-solide, submitted in Octobre 2008.

Ph. D. Thesis in Co-direction (HU-UFE- UPVD France)

1. Mohamed Hegazy, UFE Egypt-UPVD France, co-direction of Ph. D. thesis, analysis and optimization of volumetric solar receivers using innovative materials for high temperature applications.

Reporter Ph.D. and Master Thesis

1. Member of committee, Ph.D. Thesis, Vincent Morrison, TREFLE, University of Bordeaux, Energy storage systems coupled with systems of electricity production using solar energy, 2007.
2. Reporter, Ph.D., Salem Mosbah, Multiple scales modeling of solidification grain structures and segregation in metallic alloys, Ecole de Mines de Paris.

Reviewer, International Journals

1. Journal of heat and mass transfer
2. International journal of applied thermal engineering
3. International journal of thermal sciences
4. Journal of applied energy
5. Numerical heat transfer
6. Computers and fluids
7. Building and environment
8. Solar energy
9. International Journal of Heat and Mass Transfer

Head of session

International Conference of Thermal Engineering Theory and Applications, ICTEA 2009, Abu Dhabi, Session D1: Energy Management and Energy systems.

Leadership and Management Skills

Active participation in taking full responsibility of leadership and management at various levels of administrative positions as described below.

Career

Egypt:

- Vice Dean for education and students affairs, Faculty of Engineering, Helwan University, Cairo, Egypt, Sept. 2013- Sept. 2016.
- Head, Mechanical Engineering Department, Faculty of Engineering, Helwan University, Cairo, Egypt, April 2013- Sept. 2016.
- Professor, Mechanical Engineering Department, Faculty of Engineering, Helwan University, Cairo, Egypt, April 2012- Present.
- Acting Dean, Faculty of Engineering at Benha, Benha University, 2012, Benha, Egypt.
- Vice Dean for post graduate studies and research, Benha High Institute of Technology, Benha University, Egypt, May 2010- 2012.
- Professor, Mech. Engg. Dept., Benha High Institute of Technology, Benha University, Egypt, May 2010- 2012.
- Associate Professor, Mech. Engg. Dept., Benha High Institute of Technology, Benha University, Egypt, Sept. 2009- 2010.
- Associate Professor, Mech. Engg. Dept., Benha High Institute of Technology, Benha University, Egypt, 2004- present.
- Assistant Professor, Mech. Engg. Dept., Benha High Institute of Technology, Benha, Egypt, 1996-2004.
- Lecturer assistant, Mech. Engg. Dept., Benha High Institute of Technology, Benha, Egypt, 1990-1993.
- Research assistant, Solar Energy Department, National Research Center, Cairo, Egypt, 1989-1990.
- Workshop officer, Egyptian Military Forces, 1987-1989.

France:

- Invited researcher, CNRS (National centre for scientific research), France, Sept. 2007- Sept. 2009.
- Visiting professor, TREFLE-site ENSCPB, BORDEAUX, FRANCE, 2002-2006.

Attendance of Training Workshops

Training workshops in quality assurance and accreditation and strategic planning.

Positive Participation in Faculty and University Development

Teaching and Continuous Education

Undergraduate Courses: Applied thermodynamics, cryogenics, heat transfer, refrigeration and air conditioning, refrigeration technology, energy systems components, fluid mechanics, technology and society, maintenance of refrigeration and air conditioning systems, theory of machines, measurements and control, project management, graduation projects.

Post graduate Courses: computational heat transfer, advanced heat transfer, measurements and control, research seminars, special topics in manufacturing technology; sensors and actuators.

Continuous education and training programs:

1. National project for development and progress of technical education, training courses for refrigeration and air conditioning teachers, Ministry of education in collaboration with Janco Company, Cairo, 2001.
2. Design, maintenance, and operation of refrigeration and air conditioning systems, training courses for engineers, Arab Contractors Company in collaboration with Proservice, Cairo, 2001-2002.
3. Continuous education and training courses in the fields of refrigeration, air conditioning, and pollution control systems, in collaboration with the Arabic Society for Business Management, engineering sector, Cairo, 2001-2002.
4. Training courses for quality installation and commissioning of air conditioning system, EGEC-Consukorra, Cairo, 2013.
5. Instructor for Cement Diploma Courses, Dedusting Equipment.

Faculty Development

- Development of air conditioning, heat transfer, solar energy, fluid mechanics laboratories in Behna Faculty of Engineering, Benha University.
- Development of undergraduate and postgraduate mechanical engineering curriculum in Benha Faculty of Engineering, Benha University.
- Development of Nano technology laboratory, Helwan University.
- Development of new curriculum, Faculty of Engineering at Helwan, Helwan University.
- Development of Schneider Electric Laboratory, Faculty of Engineering at Helwan, Helwan University.
- Development of Solar Central Receiver Demo and Testing Plant, Faculty of Engineering at Helwan, Helwan University.
- Development of Students affairs department, Faculty of Engineering at Helwan, Helwan University.
- Active participation in quality and accreditation activities, Faculty of Engineering at Helwan, Helwan University.
- Development of Education Monitoring Unit, Faculty of Engineering at Helwan, Helwan University.
- Development of Electronic Management System of Students Affairs, Faculty of Engineering at Helwan, Helwan University.
- Head of training unit, Faculty of Engineering at Helwan, Helwan University.
- Head of evaluation of assessment unit, Faculty of Engineering at Helwan, Helwan University.

- Development of Scientific Club for students' activities, Faculty of Engineering at Helwan, Helwan University.

Strategic Planning

Active member of strategic plans development team for:
- Strategic Plan, Benha Faculty of Engineering, Benha University.
- Strategic Research Plan, Benha Faculty of Engineering, Benha University.
- Strategic Plan, Benha University.
- Strategic Research Plan, Benha University.
- Strategic Plan, Faculty of Engineering at Helwan, Helwan University.
- Strategic Research Plan, Faculty of Engineering at Helwan, Helwan University.

Research Projects

1. MASTER-ENSCPB, FRANCE: Borne de branchement eau, étude thermique, MAEC-CAHORS, 2002/2003.
2. TREFLE-CNRS, FRANCE : Systèmes de stockage d'énergie thermique couplés à la production d'électricité par des technologies solaires thermodynamiques, projet européen DISTOR, 2004/2005.
3. TREFLE-Saint Gobain, FRANCE : Convection naturelle dans des systèmes mixtes fluide-poreux de grande extension : application à l'isolation de l'habitat Natural Convection in composite fluid-porous insulating walls, 2005/2006.
4. IMHOPTEP-EGIDE, Advanced composite materials for desiccant cooling systems, TREFLE , France-BHIT (Egypt), 2006/2008.
5. Etude de la formation des microstructures et des macroségrégations en solidification d'alliages, project of National Research Agence (ANR), France, SMACS. In collaboration between four French laboratories:LSG2M (Nancy), CEMEF (Paris), FAST (Paris), SIMAP (ALPES), Nov. 2008 -Sept.2012.
6. STS-Med, Small scale thermal solar district units for Mediterranean communities, 20 Mediterranean local communities involved, European Neighbourhood and Partnership Instrument (ENPI), 2013-2015, http://www.stsmed.eu/project/.
7. EUROSUNMED, EURO-MEDITERRANEAN COOPERATION ON RESEARCH & TRAINING IN SUN BASED RENEWABLE ENERGIES, 2013-2015, http://www.eurosunmed.eu/content/project.
8. MATS, FP7 – MATS Project Multipurpose Applications by Thermodynamic Solar, http://www.mats.enea.it/
9. Coordinator, ERASMUS+ Exchange Program, HU and VGTU Lituania.
10. Principal investigator of Helwan University, MEDSOL ERSMUS+ Project.
11. Project Manager for the development of Nanotechnology Centre at Helwan University.

Language Skills

1. English: Speaking very Good, Writing very good, Understanding very good.
2. French: Speaking Good, writing good, understanding very good.

International Conferences

1. International Solar Energy conference, Solar Energy society, Cairo, Egypt, 1992.
2. ISHMT-ASME Conference, Surathkal, Karnatka, India, 1995.
3. IDA World Congress, Abu Dhabi, 1995.
4. Second Minia International Conference for Advanced Trends in Engineering, April 2002.
5. AMME conference, Cairo, Egypt, 2002.
6. Congrès Français de Thermique, SFT 2004, Presqu'île de Giens, France, May 2004.
7. Int. Conference of Crystal growth, ICCG 14, France, August 2004.
8. ICCHMT 2005, Paris, May 2005.
9. HEFAT 2005, Cairo, Sept. 2005.
10. Récents Progrès en Génie des Procédés, Toulouse, France, Sept. 2005.
11. Congrès Français de Thermique, SFT 2006, Île de Ré, 16-19 mai 2006.
12. ECOSTOCK, 2006.
13. Modeling of Casting, Welding and Advanced Solidification Processes XI MCWASP Conference, Opio, France, May 2006.
14. Int. Congres "New Tendances in Thermal Insulation of Buildings, Moscou (Russie), 7-10 Novembre 2006.
15. The 8th day on porous media, JEMP, Lyon, France, 24-25 Oct. 2007.
16. Eurotherm, 2008.
17. SFT 2008.
18. ICTEA, Abu Dhabi, Jan. 2009.
19. EUROMAT 2009.
20. Société Française de Thermique 2010, Le Touquet, 25-28 mai (2010) 493-498.
21. MCWASP 2012, Schladming, Austria, June 17-22 2012.
22. ICTEA conference, Istanbul, Turkey, 2012.
23. 3rd International Symposium on Environment Friendly Energies and Applications (EFEA 2014), 19-21 November 2014, Paris.
24. 7th International Conference on Sustainability in Energy and Buildings, SEB-15, Lisbon, Portugal, 1-3 July 2015.
25. 9th International Conference on Compressors and their Systems, City University London, 7-9 September 2015.
26. ICRERA, International Conference on Renewable Energy Research and Applications, 22-25 November 2015, Palremo, Italy.

Publications

1. Mobarak, A., Salak, M., Huzyyin, A., and **Rady, M. A.**, 1992, A Simulation Model for Natural Circulation Solar Energy Water Heaters, International Solar Energy Conference, Solar Energy Society, Cairo,Egypt.

2. Mobarak, A., Salak, M., Huzyyin, A., and **Rady, M. A.**, 1992, Effect of Tank Elevation on Natural Circulation Solar Energy Water Heaters, International Solar Energy Conference, Solar Energy Society, Cairo, Egypt.

3. **Rady, M. A.** and Mohanty A. K., 1995, Single domain analysis of natural convection during melting and solidification of pure metals, ISHMT conference, pp.297-302, Surathkal, Karnatka, India.

4. **Rady, M. A**. and Mohanty A. K., 1995, Thermally Buoyant combined convection of saline water through vertical pipes, IDA World Congress, Abu Dhabi.

5. **Rady, M. A.** and Mohanty A. K., 1996, Natural convection during melting and solidification of pure metals in a cavity, Numerical Heat Transfer, Part A, Vol. 29, pp.49-63.

6. **Rady, M. A.**, Satyamurty V. V., and Mohanty A. K, 1997, Effects of liquid superheat during solidification of pure metals in a square cavity, Heat and Mass Transfer, Vol. 32, pp.499-509.

7. **Rady, M. A.**, Satyamurty V. V., and Mohanty A. K, 1997, Thermosolutal convection and macrosegregation during solidification of hypereutectic and hypoeutectic binary alloys in statically cast trapezoidal ingots, Metallurgical and Materials Transactions, Vol. 28 B, pp.943-954.

8. **Rady, M. A.** and Nada, S. A., 1998, Solidification of hypereutectic and hypoeutectic binary alloys with buoyancy and surface tension driven natural convection, Heat and Mass Transfer, Vol. 34, pp.337-347.

9. **M. A. Rady**, 2000, Buoyancy effects on the flow and heat transfer characteristics of an impinging semi-confined laminar slot jet, Int. J. of Transport Phenomena, Vol. 2, pp.113-126.

10. M. A. Rady, 2002, A study on the performance of convection schemes using a unified control-volume formulation, 2nd Minia International conference for Advanced Trends in Engineering, 7-9 April 2002.

11. **Rady, M. A**., Moawed M., Ibrahim E. Z., and Elsayed A. O., 2002, An experimental study of fluid flow characteristics around a semi-circular tube, Proceeding of the 10th Int. AMME conference, 14-16 May, pp.625-636.

12. Nada, S. A., **Rady, M. A.**, Mowad, M., 2002, Experimental investigation of free convection from a horizontal semicircular cylinder at different orientations, Journal of Engineering Sciences, Assuit University, Vol. 30, No. 3, pp.731-744.

13. Huzayyin, A. S., Bawady, A. H., **Rady M. A.**, and Dawood, A., 2004, Experimental Evaluation of Diesel Engine Performance and emission using blends of jojoba oil and Diesel fuel, Energy Conversion and Management, Vol. 45 , pp.2093-2112.

14. Huzayyin, A. S., Bawady, A. H., **Rady M. A.**, and Dawood, A., 2004, Performance and emission characteristics of Diesel engine using blends of jojoba oil and jojoba methyl ester with gas oil, Journal of Engineering Sciences, Faculty of Engineering, Ain Shams University, Egypt, Vol. 39, No. 2, pp. 473-495.

15. Huzayyin, A. S., Nada, S. A., **Rady, M. A.**, and Faris, A., 2004, Cooling an array of multiple heat sources by a row of slot air jets, Journal of Engineering Sciences, Faculty of Engineering, University of Assiut, Egypt, Vol. 32, No. 2, pp. 837-858.

16. Eric Arquis and **Mohamed Rady**, 2004, Fusion d'une particule en "sédimentation", Congrès Français de Thermique, Presqu'île de Giens, 25-28 Mai 2004, SFT 2004, Volume 1, pp.149-154.

17. Eric Arquis and **Mohamed Rady**, 2004, Numerical simulation of microsegregation during dendritic solidification of binary alloys, Journal of Engineering Sciences, Faculty of Engineering, University of Assiut, Egypt, Vol. 32, No. 3, pp. 1147-1168.

18. E. Arquis and **M. Rady,** Numerical approaches for microsegregation modelling during alloy solidification, Poster session, International conference of crystal growth, Grenoble, France, August 2004.

19. Eric Arquis and **Mohamed Rady**, 2005, Study of natural convection heat transfer in a finned horizontal fluid layer, International Journal of Thermal Sciences,Vol. 44, pp. 43-52.

20. Eric Arquis and **Mohamed Rady**, 2005, A fixed domain model for microsegregation during alloy solidification, Heat and Mass Transfer, Vol. 41, pp. 545-558.

21. Eric Arquis, **Mohamed Rady**, and Guillaume Novelli, 2005, Natural convection melting of ice spheres in water filled cylindrical enclosures, 4th ICCHMT-Paris, Progress in computational heat and mass transfer, Vol. 2, pp. 1113-1118.

22. Morrisson Vincent, **Rady Mohamed**, Palomo Elena et Arquis Eric, 2005, Systèmes de stockage d'énergie thermique couplés à la production d'électricité par des technologies solaires thermodynamiques, Récents Progrès en Génie des Procédés, Numéro 92 – 2005.

23. **M. A. Rady** and E. Arquis, 2006, Numerical approaches for microscopic modelling of solute redistribution during solidification of binary alloys, Heat and Mass Transfer, 42: 347–358.

24. **Mohamed Rady** and Eric Arquis , 2005, On the numerical modeling of alloy solidification using a single-domain coupled dual-scale model, 4th International conference on Heat Transfer, Fluid Mechanics and Thermodynamics, Cairo-Egypt.

25. **Mohamed Rady** and Eric Arquis , 2005, Effects of exhaust port geometry and confinement surface protrusions on heat transfer behavior of impinging slot jets,4th International conference on Heat Transfer, Fluid Mechanics and Thermodynamics, Cairo-Egypt.

26. **M. Rady** and E. Arquis, 2006, Heat transfer enhancement of multiple impinging slot jets with symmetric exhaust ports and confinement surface, Applied Thermal Engineering, Vol. 26, 1310-1319.

27. **M. Rady** and E. Arquis, 2006, A micro/macro model for numerical simulation of dendritic alloy soldification, Modeling of Casting, Welding and Advanced Solidification Processes XI MCWASP Conference, Opio, France, May 2006.

28. Eric ARQUIS, **Mohamed RADY** and Cristian CIUCASU, Convection naturelle dans des systèmes mixtes fluide-poreux de grande extension : application à l'isolation de l'habitat, Congrès Français de Thermique, SFT 2006, Île de Ré, 16-19 mai 2006.

29. MORISSON Vincent, **RADY Mohamed**, PALOMO Elena and ARQUIS Eric, 2008, Thermal Energy Storage Systems for Electricity Production Using Solar Energy Direct Steam Generation Technology, Chemical Engineering and Processing, vol. 47, pp. 499-507.

30. Jean-Pierre BEDECARRATS, Yves LE GUER, Jean-Pierre DUMAS, Eric ARQUIS and **Mohamed RADY**, 2006, Etude de l'ascension d'un glaçon sphérique au sein d'une colonne d'eau, Congrès Français de Thermique, SFT 2006, Île de Ré, 16-19 mai 2006.

31. E. Arquis, **M. A. Rady**, S.A. Nada, 2007, A numerical investigation and parametric study of cooling an array of multiple protruding heat sources by a laminar slot air jet, International Journal of Heat and Fluid Flow, Volume 28, Issue 4, pp. 787-805.

32. **Mohamed Rady** and Eric Arquis, 2006, A dual-scale coupled micro/macro segregation model for dendritic alloy solidification, Heat Mass Transfer , 42, 1129-1141.

33. Eric ARQUIS, **Mohamed RADY** and Cristian CIUCASU, 2006, Convection phenomenon in mineral wool installed on vertical walls, Int. Congres "New Tendances in Thermal Insulation of Buildings, Moscou (Russie), 7-10 Novembre 2006.

34. V. Morisson, E. Palomo Del Barrio, **M. Rady,** 2006, Heat transfer modelling within graphite/PCM composite materials for high temperature energy storage, Ecostock 2006, The tenth international conference on thermal energy storage, May 31 –June 2,at the Richard Stockton College of New Jersy, USA.

35. F. Loghmari, C. Le Bot, **M. Rady,** D. Delaunay, D. Gobin, 2008, Determination of Two media contact conditions during rapid solidification : Application for droplet impact and solidification 22nd European Conference on Liquid Atomization and Spray Systems, Como Lake, Italy.

36. F. Loghmari, C. Le Bot, **M. Rady,** D. Delaunay, D. Gobin, 2008, Détermination des conditions de contact de milieux avec cinétique de solidification rapide. Congrès français de Thermique, Société Française de Thermique. Toulouse.

37. M. A. Rady, A. S. Huzayyin, E. Arquis, C. Le Bot, P. Monneyron, E. Palomo, 2009, Study of heat and mass transfer in a dehumidifying desiccant bed with macro-encapsulated phase change materials, Renewable Energy, 34, pp. 718–726

38. M. A. Rady, A. S. Huzayyin, E. Arquis, C. Le Bot, P. Monneyron, E. Palomo, 2007, Etude des transferts de masse et de chaleur dans un lit déshumidificateur déshydratant à matériau à changement de phase macroencapsulé, 8th JEMP, Lyon, France.

39. E. Arquis, **M. Rady** and J. Gilles, 2008, Convection Phenomenon in mineral wool installed on vertical walls, Building Physics Symposium, 29-31 Oct.2008, Katholieke Universitiet, Belgium.

40. M. A. Rady, A. S. Huzayyin , E. Arquis, P. Monneyron, C. Le Bot, 2008, Heat and mass transfer in a composite bed of silica gel and macro-encapsulated PCM for dehumidification, EUROTHERM 2008, Indohoven, Netherlands.

41. M. A. Rady, 2009, Experimental and numerical investigations on the performance of dehumidifying desiccant beds composed of silica-gel and thermal energy storage particles, Heat and Mass transfer, Vol. 45, pp. 545-561.

42. Mohamed Rady, Eric Arquis, and Cedric Le Bot,2008,Characterization of granular phase changing composites for thermal energy storage using the T-history method, International Journal of Energy Research, DOI: 10.1002/er.1560.

43. **Mohamed Rady**, 2009, Study of phase changing characteristics of granular composites using differential scanning calorimetry, Energy Conversion and Management, Vol. 50, pp. 1210–1217.

44. **Mohamed Rady** and Eric Arquis, A comparative study of phase changing characteristics of granular phase changing materials using DSC and T-history methods, Proceedings of the Fourth International Conference on Thermal Engineering: Theory and Applications, January 12-14, 2009, Abu Dhabi, UAE.

45. **Mohamed Rady,** 2009, Granular phase change materials for thermal energy storage: experiments and numerical simulations, Applied Thermal Engineering, Vol. 29, pp. 3149–3159.

46. Mohamed Rady, 2009, Thermal Performance of Packed Bed Thermal Energy Storage Units Using Multiple Granular Phase Change Composites, Applied Energy, Vol. 86, pp. 2704–2720.

47. Mohamed Rady, Eric Arquis, Dominique Gobin, Benoît Goyeau, Numerical simulation of macrosegregation and formation of channel segregates during alloy solidification using high-order TVD and WENO schemes, Euromat 2009, solidification symposium.

48. M. Bellet, H. Combeau, Y. Fautrelle, D. Gobin, **M. Rady**, E. Arquis, O. Budenkova, B. Dussoubs, Y. Duterrail, A. Kumar, C.A. Gandin, B. Goyeau, S. Mosbah, M. Zaloznik, 2009, Call for contributions to a numerical benchmark problem for 2D columnar solidification of binary alloys, International Journal of Thermal Sciences, Vol. 11, pp. 2013-2016.

49. Mohamed Rady, Eric Arquis, Dominique Gobin, Benoît Goyeau, 2010, Numerical Simulation of Channel Segregates during Alloy Solidification Using TVD schemes, International Journal of Numerical Methods for Heat & Fluid Flow, Volume 20 issue 8, pp.841 – 866.

50. Combeau Hervé, Bellet Michel, Fautrelle Yves, Gobin D., Arquis E., Budenkova O., Dussoubs B., Duterrail Y., Kumar A., Mosbah Salem, **Rady M**., Gandin Charles-André, Goyeau B., Založnik M., Formation de macroségrégations pendant la solidification d'un alliage Sn-Pb : Synthèse des premiers résultats d'un benchmark, Matériaux 2010, October 18-22, 2010, Nantes, DVD-Rom published by Fédération Française des Matériaux, ISBN 978-2-9528-1403-4 (2010) 9 pages.

51. Combeau Hervé, Bellet Michel, Fautrelle Yves, Gobin D., **Rady M.**, Arquis E., Budenkova O., Dussoubs B., Duterrail Y., Kumar A., Gandin Charles-André, Goyeau B., Mosbah Salem, Založnik M., Benchmark sur la simulation des macroségrégations lors de la solidification d'un alliage : première synthèse, Société Française de Thermique 2010, Le Touquet, 25-28 mai (2010) 493-498.

52. Combeau Hervé, Bellet Michel, Fautrelle Yves, Gobin D., **Rady M.**, Arquis E., Budenkova O., Dussoubs B., Duterrail Y., Kumar A., Gandin Charles-André, Goyeau B., Mosbah Salem, Založnik M., Analysis of a Numerical Benchmark for 2D Columnar Solidification of Binary Alloys, MCWASP 2012, Schladming, Austria, June 17-22, 2012.

53. I.M. Mahmoud, A.S. Huzayyin , **M.A. Rady**, Effect of Thermostat Setting Temperature on the Performance of Household Refrigerator, ICTEA conference, Istanbul, Turkey, 2012.

54. W. G. Alshaer, E. Palomo del Barrio, **M. A. Rady**, O. E. Abdellatif, S. A. Nada, Analysis of the anomalous thermal properties of phase change materials based on paraffin wax and multi walls carbon nanotubes, International Journal on Heat and Mass Transfer - Theory and Applications (IREHEAT), 2014, Vol. 1, n. 5, pp. 297-307.

55. W.G. Alshaer, S.A. Nada, **M.A. Rady**, Cedric Le Bot, Elena Palomo Del Barrio, Numerical investigations of using carbon foam/PCM/Nano carbon tubes composites in thermal management of electronic equipment, Energy Conversion and Management 89 (2015) 873–884.

56. W.G. Alshaer, S.A. Nada, **M.A. Rady**, Elena Palomo Del Barrio, Alain Sommier, Thermal management of electronic devices using carbon foam and PCM/nano-composite, International Journal of Thermal Sciences 89 (2015) 79-86.

57. Mohamed Ahmed, Amr Amin, **Mohamed Rady**, Multi Applications of Small Scale Solar Power Plant Using Organic Rankine Cycle and Absorption Chiller, 3rd International Symposium On Environment Friendly Energies And Applications (EFEA 2014), 19-21 November 2014, Paris, 10.1109/EFEA.2014.7059944, Publisher IEEE.

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