

## FACULTY RESEARCH PROFILE

Date of profile: 8<sup>th</sup> August 2017

**NAME** : **Dr. NASSER, I.M.A.**

**RANK** : Professor

**DEGREE/YEAR/** : Ph. D./ 1985 /

**INSTITUTION** : University of Connecticut, Storrs (UCONN), USA.

**FIELD** : Theoretical Physics

**CONCENTRATIONS** : Atomic and Molecular Physics  
Condensed Matter

### **Research Activities:**

1. Atomic and Molecular Physics
2. Condensed matter.
3. Phase transitions and critical phenomena.
4. Applied laser.

**Biography, Bibliography and Professional Summary  
of  
Ibraheem M.A. Nasser, Professor  
Professor of Theoretical Physics**

Date of Birth:	4 November 1952, Egypt
<i>Correspondence Address :</i>	Physics Department (DEPT), College of science, King Fahd University of Petroleum and Minerals (KFUPM), P.O. Box 1994, Dhahran, 31262, Saudi Arabia.
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**Education background**

1985 - Ph.D., Atomic Physics, University of Connecticut, Storrs, USA.  
1978 - M.Sc. Physics, Ain Shams University (ASU), Cairo, Egypt.  
1976 - Diploma in Computer Programming, IBM Computer Centre, ASU, Cairo, Egypt  
1974 - B.Sc. (Hons.), Physics, ASU, Cairo, Egypt.

**Employment History**

<b>From</b>	<b>To</b>	<b>Occupation</b>
2000	present	Professor, Physics Department, KFUPM, SA.
1994	1995	Visiting Professor, Institute of Theo. Phys., Johannes Kepler University, Linz, Austria.
1991	1999	Associate Professor, Physics Department, KFUPM, SA.
1988	1990	Assistant Professor, Physics Department, KFUPM, SA.
1986	1988	Post Doc, Physics Department, UCONN, USA.
1985	1986	Assistant Professor, Physics Department, Ain Shams University, Egypt.
1979	1985	Teaching Assistant, Physics Department, UCONN, USA.
1978	1979	Assistant Lecturer, Physics Department, ASU, Cairo, Egypt.
1974	1978	Teaching Assistant, Physics Department, ASU, Cairo, Egypt.

**Visiting Professor:**

1. Summer (1994, 1996 and 1997), at Institute of Theoretical Physics, Johannes Kepler University, Linz, Austria.
2. Summer 1990, January and February 1991, at Physics Department, UCONN, USA.

**Teaching Experience and Related Work at KFUPM:**

1. At KFUPM, I taught many courses for graduate (M.Sc. and Ph.D.) and undergraduate students. Some of them were offered for the first time at the Physics Department, e.g. Phys 551 (Atomic & Molecular Physics) and Phys. Phys 373 (Introduction to Computational Physics) Phys 630 (Phase transition and Critical Phenomena).
2. In summer 1989, I participated in the development of a demonstrating course for Phys 101.
3. I worked as the principal in the development of the course Statistical Mechanics II in our proposed Ph. D. program.
4. I was the principal in the course development of Introduction to Computational Physics.
5. I was a conveyor in the development of our new undergraduate program for the courses: Thermal Physics and Statistical Mechanics. The main work was to develop the course description, prerequisite, textbook, and details of topics covered in these courses.

6. In the year of 1998-1999, I have participated in preparing the teaching schedules for our Physics faculties.

### University, College, Department and Public Services

- **Committees:** I have participated in many committees at the University, College, and Department levels. See page 11 for more details. For example: Library, Teaching and advising award, Teaching, Text books, and Phys. 101 and 102 exams' committees.
- **Journals and research proposals:** I refereed many papers for AJSE, and Applied Research Center at Om Al-Kora University. Also, I helped in the Arabic translation of some abstract for AJSE. I reviewed many research proposals for different Universities at the Kingdom.
- **Promotions:** I refereed many promotions for the ranks of Associate professors and professors.
- **External Examiner:** For many of Ph. D. and M. Sc. Thesis.

### Research Experience:

My previous research work has been in the theoretical analysis and modelling of electron-atom collision processes that occur in high temperature plasmas, such as those found in astrophysical systems, thermonuclear fusion reactions, and x-ray laser experiments. I have investigated electron recombination, charge exchange, ionization, excitation processes, and the electric field effect upon high Rydberg states. Also, I was searching the electron impact excitation, ionization, and capture by singly charged ions C, O, N, F, P, and S to analyse the global warming of the atmosphere at low temperature. I investigated the configuration mixing effect upon doubly excited states of neutral atoms. During my sabbatical year 1994-1995, I did research in the area of phase transition and critical phenomena to study the crossover phenomena in ferroelectric materials using the renormalization group theory. I published 3 sole and 4 joint research papers in the field. During the years 2000-2004, I joint the laser research group and published with them more than 7 papers. Recently, I shifted back to the area of the atomic and molecular physics. Most of our papers are published in very respectable mainstream journals, e.g. Physical Review A and B, Journals of Physics B, JQSRT, Int. J. Theor. Phys., Zeitschrift Fur Physik, Molecular Physics, and Phys. Scripta, and Int. Jour of Quantum Chemistry, which reflect the quality of our work.

### Published Books

- 1- "المنهج الدراسي الأول لميكانيكا الكم"، تأليف إبراهيم ناصر وعفاف السيد عبد الهادي - الناشر: مكتبة النهضة المصرية 2003.
  - 2- "ميكانيكا الكم بطرق تقريبية"، تأليف إبراهيم ناصر وعفاف السيد عبد الهادي - 2005.
  - 3- "مبادئ أساسية في الفيزياء الإحصائية"، تأليف إبراهيم ناصر - 2006.
  - 4- "أساسيات ميكانيكا الكم بأمثلة محلولة"، تأليف إبراهيم ناصر وعفاف السيد عبد الهادي - الناشر: مكتبة العبيكان 2013.
  - 5- "أساسيات الفيزياء الحرارية والإحصائية"، تأليف إبراهيم ناصر وعفاف السيد عبد الهادي وعبد الله السندي - الناشر: مكتبة العبيكان 2015.
- 6- **Ibraheem Nasser** "General Physics by Examples with Multiple-Choice Questions for Waves, Sound, Heat and Thermodynamics" 2009.
  - 7- Al\_Jalal, **Ibraheem Nasser** and Khateeb Al-Rahman "General Physics Multiple-Choice Questions Waves Thermodynamics Electricity and Magnetism" Published by Al-Obeikan 2010.

### Arabic Books (Projects supported by KFUPM and others)

- **Ibraheem Nasser and Al-Sunaidi** "Principal of thermal and statistical physics" in Arabic, KFUPM.
- **Ibraheem Nasser and M.S. Abdelmoneim** "Essential Principles of Electric and Magnetic Theory " in Arabic, in progress. Project # AR100002.
- **Ibraheem Nasser and Afaf E. Abd El-Hady** "Essential of quantum mechanics with solved problems", in Arabic, KFUPM.

### **Computer Language/Skills:**

Fortran, Basic, Algol, and Script. Familiar with JCL/MVS, SAS and MATHEMATICA.

### **Short Courses:**

1. “Medical Physics: Its Importance and Its Future in the Kingdom”, KFUPM, Physics Department, (March 16, 2002). In organization between the male side and the women group representative (Dr. Afaf).
2. “First workshop for the Secondary School Physics Ladies Teachers”, Physics Department, KFUPM, (August 31 – September 4., 2002). I taught electricity and magnetism for 5 hours. Also, I worked in the organization between the men section and the ladies’ laboratory’s coordinator (Dr. Afaf).
3. “Second workshop for the Secondary School Physics Ladies Teachers”, Physics Department, KFUPM, (February 21 – February 28., 2003). I taught thermodynamics for 2:30 hours. Also, I worked in the organization between the men section and the ladies’ laboratory’s coordinator (Dr. Afaf).
4. “Third workshop for the Secondary School Physics Ladies Teachers”, Physics Department, KFUPM, (August 30 – September 4., 2003). Also, I worked in the organization between the men section and the ladies’ laboratory’s coordinator (Dr. Afaf).
5. “Second workshop for the Secondary School Physics Men Teachers”, Physics Depa., KFUPM, (September 4 - September 11, 2003). I taught thermodynamics for 2:30 hours.

### **Attended the following workshops/training and short courses:**

1. “Good evaluation a critical part of good teaching” KFUPM, (23 - 27 Nov., 1991).
2. “Personal Computer & DOS” KFUPM, Data Processing Center, (7 - 12 Nov., 1992).
3. “Introduction to Dbase IV “ KFUPM, Data Processing Center, (12 - 13 Dec., 1992).
4. “Data Base System “ KFUPM, Info. and Comp. Science Dep., (19 - 30 Dec., 1992).
5. “Striving for Excellence in University Teaching and Learning I”, KFUPM, Academic Development Center, (April 28 – May 01, 2001).
6. “Striving for Excellence in University Teaching and Learning II”, KFUPM, Academic Development Centre, (August 27– 29, 2001).
7. “Medical Physics: Its Importance and Its Future in the Kingdom”, KFUPM, Physics Department, (March 16, 2002).
8. “Striving for Excellence in University Teaching and Learning III”, KFUPM, Academic Development Centre, (April 7–16, 2002).
9. “How to be an Effective University Teacher”, KFUPM, Academic Development Centre, (September 7 – 8, 2002).
10. “Increasing Effectiveness as a University Teacher”, KFUPM, Academic Development Centre, (September 9 – 11, 2002).
11. “Cyramic”, KFUPM, Math. Dept., (December 7, 2003).
12. “Ostrolabe”, KFUPM, Math. Dept., (December 14, 2003).
13. “Industrial Mathematics”, KFUPM, Math Department, (Feb. 29– March 2, 2004).
14. “Introduction to Illustration Techniques”, KFUPM, Academic Development Centre, (March 28– April 6, 2004).

### **Awards and Fellowships:**

1. Egyptian Government Fellowship (1983-1985).
2. UCONN dissertation Fellowship, summers 1984.
3. Department of Physics, UCONN Summer Fellowship, 1980.

## Research Publications

### A) Papers in Refereed Journals:

- 1- **I. Nasser** and Y. Hahn, “Dielectronic Recombination Rates for He-Like Ions”, JQSRT **29**, (1983), pp.1-8.
- 2- **I. Nasser** and Y. Hahn, “Resonant Electron Capture to High Rydberg States of Ca II”, Phys. Rev. A **30**, (1984), pp.1558-1560.
- 3- A.H. Moussa and **I. Nasser**, “Positronium Formation in Helium Atom” in Positronium Formation, edited by P.C. Jain, R.M. Siagru and K.P. Gopinathan, (World Scientific Publ. Co., Singapore, 1985), pp.410-412.
- 4- D. J. McLaughlin, **I. Nasser**, and Y. Hahn, “Dependence of Dielectronic Recombination Cross Sections on the Charge States for the vanadium Ion”, Phys Rev. A **31**, (1985), pp.1926-1928.
- 5- K. J. LaGattuta, **I. Nasser**, and Y. Hahn, “Electric-Field-Induced Mixing of High Rydberg-State Levels in Dielectronic Recombination: Mg<sup>1+</sup> and Ca<sup>1+</sup> target ions”, Phys. Rev. A **33**, (1986), pp.2782-2785.
- 6- K. J. LaGattuta, **I. Nasser**, and Y. Hahn, “The Effect of Static Electric Fields on Dielectronic Recombination: I. Basic Theory”, J. Phys. B: At. Mol. Phys. **20**, (1987), pp.1565-1576.
- 7- K. J. LaGattuta, **I. Nasser**, and Y. Hahn, “The Effect of Static Electric Fields on Dielectronic Recombination: II. Atomic Structure”, J. Phys. B: At. Mol. Phys. **20**, (1987), pp.1577-1586.
- 8- **I. Nasser** and Y. Hahn, “Nested Form for Clebsch-Gordan Coefficients and Rotation Matrices”, Phys. Rev. A **35**, (1987), pp.2902-2907.
- 9- **I. Nasser** and Y. Hahn, “Effect of Sudden Rotation of Electric Filed on Dielectronic Recombination “, Phys. Rev. A **36**, (1987), pp.4704-4709.
- 10- Afaf E. Abd El-Hady, **I. Nasser**, and Y. Hahn, “Effective Charges for Radiative and Auger Transition Probabilities”, JQSRT **39**, (1988), pp.197-207.
- 11- P. Dittner, S. Datz, R. Hippler, H. Krause, P. Miller, P. Pepmiller. C. Fou, Y. Hahn, and **I. Nasser**, “Dielectronic Recombination of the B-Like Ions: N<sup>2+</sup>, O<sup>3+</sup>, and F<sup>4+</sup> “, Phys. Rev. A **38**, (1988), pp.2762-2766.
- 12- **I. Nasser** and Y. Hahn, “Dielectronic Recombination Cross Section for N<sup>2+</sup>, O<sup>3+</sup>, and F<sup>4+</sup> “, Phys. Rev. A **39**, (1989), pp.401-404.
- 13- **I. Nasser** and E. E. Abdel-Hady, “Positronium Formation in Hydrogen Like ions”, Sci. Bull. Elmenia Uni. **3**(1), (1990), pp.149-156.
- 14- **I. Nasser** “Dielectronic Recombination Cross Section for Helium Like Ions”, AJSE **16**, (1991), pp.85-88.
- 15- **I. Nasser**, R. Bellantone, and Y. Hahn, “Multiplet and Intra-shell Transitions in Resonant Radiative Capture by F II”, Phys. Rev. A **43**, (1991), pp.4854-4860.
- 16- **I. Nasser** and Y. Hahn, “Resonant Excitation and Capture by Excited F II at Low Energies”, Phys. Rev. A **44**, (1991), pp.6133-6135.
- 17- **I. Nasser** and Y. Hahn, “Resonant Excitation of F II at Low Energies”, J. Phys. B: at. Mol. Opt. Phys. **25**, (1992), pp.521-531.
- 18- A. Al-Molhem and **I. Nasser**, “Dielectronic Recombination Cross Sections and Rate Coefficients for S IV”, Phys. Rev. A **46**, (1992), pp.2945-2948.
- 19- A. Al-Molhem, A. Mekki, and **I. Nasser**, “Resonant Elastic Scattering and Electron Capture by Al-Like P III and S IV at Low Energies”, AJSE **18**, (1992), pp.167-171.
- 20- **I. Nasser** and Y. Hahn, “Resonance Excitation and Capture by P II at Low Energies”, J. of the Korean Physical Society **25**, (1992), pp.510-517.
- 21- Y. Hahn, and **I. Nasser**, “Doubly Excited Rydberg States of He I and Ba I”, Zeitschrift Fur Physik D **27**, (1993), pp.203-210.
- 22- A. Mekki, A. Al-Molhem, and **I. Nasser**, “Resonance Excitation Cross Section of Al-Like P III and S IV at Low Energies”, AJSE **18**, (1993), pp.383-395.
- 23- A. Mekki and **I. Nasser**, “Resonance Electron Capture Cross-Section for P III”, AJSE **19**, (1994), pp.707-713.
- 24- **I. Nasser** and R. Folk, “Static Crossover Behaviour in the Neighbourhood of a Lifshitz Point “, Phys. Rev. B **52**, (1995), pp.15 799-15 806.

- 25- **I. Nasser**, “Lifshitz Integral in Closed Form”, International Journal of Theoretical Physics, **42**, (1996), pp.481-484
- 26- **I. Nasser**, “Hartree Integral in Closed Form”, AJSE **22**, (1997), pp.119-121.
- 27- **I. Nasser**, Afaf Abdel-Hady, and R. Folk, “Specific-Heat Amplitude Ratio Near a Lifshitz Point”, Phys. Rev. B **56** (1997), pp. 154-160.
- 28- **I. Nasser**, “An Exactly Solvable Model for the Specific-Heat Amplitude Ratio with Uniaxial Dipolar Interaction”, Phys. Rev. B **60** (1999), pp. 2983-2987.
- 29- H. El-Ghandor, **I. Nasser**, M. Abd-El Rahman, and R. Hassan, “Theoretical Model for the Transverse Interference Pattern of GRIN Fiber Using a Laser Sheet of Light,” Optics & Lasers Technology **32** (4) (2000), pp.281-289.
- 30- H. El-Ghandor, **I. Nasser**, M. Abd-El Rahman, and A. Al-Shukri, “Transverse Interference Pattern for the Examination of Spliced Optical Fibers Proc. SPIE V-4436 (2001) pp. 205-212.
- 31- H. El-Ghandor, E. Hegazi, **I. Nasser**, and G. Behery “Capillary Tube Refractometer: A Novel Method for Measuring the Refractive Index of Crude Oil,” SAE 2002 Transactions- Journal of Fuels and Lubricants V111-4 (2002), pp.960-964.
- 32- H. El-Ghandor, E. Hegazi, **I. Nasser**, and G. Behery, “Measuring the Refractive Index of Crude Oil Using a Capillary Tube Interferometer”, Optics & Lasers Technology **35** (5) (2003), pp.361-367.
- 33- H. El Ghandoor, **I. Nasser**, Afaf Abdel-Hady, and A. Al-Shukri “A comparative Study of Spliced Optical Fibres”, Optics & Lasers in Engineering, **41**, (2004), pp. 277-287.
- 34- **I. Nasser** and Afaf Abdel-Hady, “Crossover Effect on the Susceptibility Amplitude Ratio Using Modified Gaussian Model”, IJPAP, 1,2 (2005), pp226-236.
- 35- **I. Nasser**, M. S. Abdelmonem , H. Bahlouli and A. D. Alhaidari, “The rotating Morse potential model for diatomic molecules in the tridiagonal J-matrix representation: I. Bound states” , J. Phys. B: At. Mol. Opt. Phys. **40** (2007) 4245–4257.
- 36- **I. Nasser**, M. S. Abdelmonem, H. Bahlouli and A. D. Alhaidari, “The Rotating Morse Potential in the J-Matrix Representation: II The S-Matrix Approach”, J. Phys. Mol. Opt. Phys. **41**, (2008) 215001-215008.
- 37- **I. Nasser**, M. S. Abdelmonem, H. Bahlouli and U. Al Khawaja, “Computation of Resonances and Bound States Using J-matrix Approach”, Applied Mathematics & Information Science Vol. **3** (3), (2009) pp. 335-344.
- 38- M. S. Abdelmonem, **I. Nasser**, H. Bahlouli, U. Al Khawaja, and A. D. Alhaidari, “Singular Short Range Potentials in the J-Matrix Approach”, Phys. Lett. A **373**, 2408 (2009).
- 39- H. Bahlouli, M. S. Abdelmonem and **I. Nasser**, “Analytical treatment of the Yukawa potential”, Phys. Scr. **82**, 065005 (2010).
- 40- **I. Nasser**, and M. S. Abdelmonem, “Hellmann potential in the J-matrix approach I- Eigenvalues”, Phys. Scr. **83**, (2011) pp.055004.
- 41- **I. Nasser**, M. S. Abdelmonem and Afaf Abdel-Hady, “J-Matrix approach for the exponential-cosine-screened Coulomb potential”, Phys. Scr. **84**, (2011) pp.045001.
- 42- **I. Nasser**, M. S. Abdelmonem and Afaf Abdel-Hady, “The Manning-Rosen potential using J-Matrix approach”, Mol. Phys. **111**, 1, (2013) pp.1–8.
- 43- **I. Nasser**, M. S. Abdelmonem and Afaf Abdel-Hady, “Molecular bound and resonance state energies of the Pöschl Teller like potential”, Mol. Phys. **111**, 6, (2013) pp. 817–824.
- 44- **I. Nasser**, M. S. Abdelmonem and Afaf Abdel-Hady, “The Hellmann potential in the J-Matrix approach II. Crossover phenomena and the radiative transition probabilities”, Phys. Scr. **88**, (2013) pp.055001.
- 45- **I. Nasser**, M. S. Abdelmonem and Afaf Abdel-Hady, “Scaling behaviour of the Hellman potential with different strength parameters”, Mol. Phys. **112**, 19, (2014) PP 2608–2613.
- 46- M. S. Abdelmonem, S M Al-Marzoug, Afaf Abdel-Hady and **I Nasser**, “Scaling behavior of the Yukawa potential in two and three dimensions: a comparative study”, Phys. Scr. **90**, (2015) pp. 055401.
- 47- M. S. Abdelmonem, Afaf Abdel-Hady and **I. Nasser**, “Dealing with the shifted and inverted Tietz–Hua oscillator potential using the J–matrix method”, Int. J. Quantum Chemistry **116**, 897 (2016).
- 48- M. S. Abdelmonem and **I. Nasser**, “Study of the 2–channel systems using the J-matrix method”, Mol. Phys. **114** (2016) PP 3328.

- 49- M. S. Abdelmonem, Afaf Abdel-Hady and **I. Nasser**, “Scaling behaviour of Fisher and Shannon entropies for the Exponential-Cosine Screened Coulomb Potential”, *Mol. Phys.* **115**, 13, (2017) PP 1480–1492.
- 50- M. S. Abdelmonem, Afaf Abdel-Hady and **I. Nasser**, “Information entropies for the Morse potential using the J-matrix method”, *Results in Physics* **7** (2017) PP 1778–1780.
- 51- M. Farid, Afaf Abdel-Hady and **I. Nasser**, “Comparative study of scaling behaviour of the Rényi entropy for the He-like atoms”, *IOP Conf. Series: Journal of Physics: Conf. Series* **869** (2017) pp 012011.
- 52- **I. Nasser**, Mostafa Zeama, Afaf Abdel-Hady, “The Rényi entropy for He-like atoms using the exponential-cosine screened Coulomb potential”, submitted to *Results in Physics*.

#### **B) Book Chapter:**

1. Y. Hahn, K. J. LaGattuta, and **I. Nasser**, “Resonant Electron Capture to High Rydberg States and Field Effect” in *Atomic Excitation and Recombination in External Fields*, edited by M.H. Nayfeh and C.W. Clark, (Hardwood Academic Publisher, New York, 1985) pp.339-350.

#### **C) Conference Publications:**

1. **I. Nasser**, K. J. LaGattuta and Y. Hahn “The Effect of External Electric Field on the Dielectronic Recombination Cross Section of sodium Like Ions”, presented at the 11<sup>th</sup> International Congress for Statistics, Computer Science, Social and Demographic Research, Cairo, Egypt 29 March-3 April (1986), *Sci. comp. Centre Bull.* (1986), pp.33-42.
2. G. Omar, Y. Hahn, **I. Nasser**, and A. H. Moussa, “Resonance Excitation Cross Sections and Rate Coefficients of Neon-Like Titanium”, presented at the 11<sup>th</sup> International Congress for Statistics Computer Science, Social and Demographic Research, Cairo, Egypt 29 March –3 April (1986). *Sci. Comp. Centre Bull* (1986), pp.189-201.
3. M. Abd-El Rahman, H. El-Ghandor, E. Abd El Ghafar, and **I. Nasser**, "Angular Dispersion Correlation of GRIN Fibre using a Laser Sheet of Light," *Proc. SPIE V-4317* (2001) pp. 597-603.
4. H. El-Ghandor, G. M. Behery, **I. Nasser**, A. Al-Shukri, and M. Abd-El Rahman, “Transverse Interference Pattern for the Examination of Spliced Optical Fibers (In Transmission and at Reflection,” *Proc. ATTCE 2001 V-4 Materials* (2001) pp. 159-165.
5. **Nasser**, M. S. Abdelmonem and Afaf Abdel-Hady, “Handling the singularities of the perturbed Kratzer and inverted Kratzer potentials ” *NUPPAC 11*, 8<sup>th</sup> Conference on Nuclear and Particle Physics, 20-24 Nov. 2011, Hurghada, Egypt, pp.123-130.
6. **I. Nasser**, M. S. Abdelmonem and Afaf Abdel-Hady, “Handling the singularities of the Kratzer type potentials”, Extended abstract, Fifth Saudi Science Conference, College of Applied Sciences Umm Al-Qura University Makkah, Saudi Arabia (2012) pp. 46-47.
7. **I. Nasser**, M. S. Abdelmonem, Mostafa Zeama, and Afaf Abdel-Hady, “The oscillators’ strength and the radiative transition probabilities for highly charged impurities ions, 6th Environmental Physics Conference, Hurghada, Egypt, 20-24 September 2014. <http://www.afaqscientific.com/epc14/>

#### **D) Conference Presentations:**

- 1- Y. Hahn, A. Abd El-Hady and **I. Nasser**, “Effective Charges for Radiative and Auger Transition Probabilities”, presented at the XV<sup>th</sup> Annual Meeting of the Division of Electron and Atomic Physics, University of Connecticut, Storrs, Connecticut, 30 May – 1 June 1984. *Bull. Am. Phys. Soc.*, 29 (4), 804 (1984).
- 2- Y. Hahn, K. J. LaGattuta and **I. Nasser**, “Angular Momentum Shift of High Rydberg States by Time-Dependent External Fields” *Proc. Of XIV – the ICPEAC*, July 1985, Stanford CA.
- 3- K.J. Lagattuta, Y. Hahn and **I. Nasser**, “Effect of electric Field Upon Dielectronic Recombination of Li Sequence Target Ions”, presented at the Fifth Conference on Atomic Processes in High Temperature Plasmas, Asilomar, California 25-28 February 1985. *Bull. Am. Phys. Soc.*, 30 (6), 1129 (1985)

- 4- **I. Nasser**, K.J. LaGattuta and Y. Hahn “Field-Assisted Dielectronic Recombination in Mg II and CaII”, presented at the Fifth Conference on Atomic Processes in High Temperature Plasmas, Asilomar, California 25-28 February 1985. Bull. Am. Phys. Soc., 30 (6), 1129 (1985)
- 5- **I. Nasser**, and Y. Hahn, “Effect of Sudden Rotation of Electric Field on Dielectronic Recombination Cross Section of Mg II”, presented at the Annual APS Meeting of the Division of Atomic, Molecular and Optical Physics, Cambridge, MA, USA, 18-20 May 1987. Bull. Am. Phys. Soc., 32 (5), 1274 (1987)
- 6- **I. Nasser**, Y. Hahn, and D. McLaughlin, “Resonant Transfer and Excitation Cross Sections for Helium-Like Ions” Proc. Of XV-th ICPEAC, July 1987, Brighton, U.K.
- 7- **I. Nasser** and R. Folk, “Static Crossover Behavior in the Vicinity of a Lifshitz Point” Proc. Of 20<sup>th</sup> Seminar of the Middle-European Cooperation on Statistical Physics, March 21-23, 1995, at Schloss Puchberg/Wels, Austria.
- 8- H. El-Ghandor, E. Abd El Ghafar, M. Abd-El Rahman and **I. Nasser**.”Fresnel Diffraction Pattern of PC-Microchip” Proc. Of the first Saudi Science Conference. April 9-11, 2001, at KFUPM. Dhahran, Saudi Arabia.
- 9- H. El-Ghandor, **I. Nasser**, M. Abd-El Rahman, and A. Al-Shukri, “Transverse Interference pattern for the examination of spliced optical fiber”, SPIE’s 46<sup>th</sup> annual meeting 29<sup>th</sup> July-3<sup>rd</sup> August 2001, San Diego, California, USA.
- 10- H. El Ghandoor, Nabil Maaleg, Dallal Al-Tammimi, and **I. Nasser** “Laser Interference glucometry”, Proc. Of the Second Middle East Nondestructiv Testing Conference, December 8-10, 2003, Gubail, Saudi Arabia.
- 11- H. El-Ghandor, E. Hegazi, **I. Nasser**, and G. Behery, “Nondestructive testing of Crude Oil Using Capillary Tube Moire Interferometer”, Proc. Of the Second Middle East Nondestructiv Testing Conference, December 8-10, 2003, Gubail, Saudi Arabia.
- 12- H. El-Ghandor, E. Hegazi, **I. Nasser**, and G. Behery, “Testing of the optical Behavior of Liquid Layers Using Laser Sheet Method”, Proc. Of the Second Middle East Nondestructiv Testing Conference, December 8-10, 2003, Gubail, Saudi Arabia.
- 13- Nabil Maaleg, **I. Nasser**, Dallal Al-Tammimi, and H. El Ghandoor,”Laser Interference Measurement of Glucose in Liquid” Proc. Of the second Saudi Science Conference. March 15-17, 2004, at King Abdulaziz University, Jeddah.
- 14- **I. Nasser** and Afaf Abdel-Hady, " Crossover effect on the susceptibility amplitude ratio near uniaxial dipolar ferromagnets" The second meeting of the Saudi Physical Society, November 20-24, 2005, at Physics Department at Umm Al-Qura University, Mecca Al-Moccarama.
- 15- **I. Nasser**, U. Al-Khawaja, M. S. Abdelmonem, A. D. Alhaidari and H. Bahlouli, “Bound States and Resonances Using the J-Matrix Approach”, Sixth Int. Scientific Conf., Azhar Univ., Cairo. Egypt March 24-26 (2008).
- 16- M. S. Abdelmoem, **I. Nasser**, **H. Bahlouli** and U. Al-Khawaja, “Computations of Resonances and Bound States Using the J-Matrix Approach”, The 4th Meeting of the Saudi Physical Society, Riyadh, 11-12 November (2008).
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