**C. V. of Prof. Dr.\Samy Abdel-Hakim A. El-Sayed**

**Prof. Dr. of experimental physics**

**Phys. Dept., Faculty of Science, Beni-Suef University**

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<https://www.researchgate.net/profile/S_El-Hakim>

google scholar link: <https://scholar.google.com.eg/citations?user=Qipm-TwAAAAJ&hl=en>

**Education**

* Ph.D.in nuclear electronic physics; at Semiconductor Physics Department, Faculty of Physics, Byelorussian State University, Minsk, Republic Belarus, July 1992. The Title of Ph.D. Thesis is “Low temperature electrical properties of Germanium structural disordered by irradiation reactor neutrons”
* M.Sc. of solid state physics; Ain Shams University, Cairo, Egypt, April 1986.

The Title of M.Sc. Thesis is “Addition effect of Thallium on Some Physical Properties of amorphous As2Se3”

* B. Sc. of Physics; Ain Shams University, Cairo, Egypt, May 1982, grade very good.

**QUALIFICATIONS**

* Highly motivated, good communication and inter-personal skills, and able to learn new technologies quickly.
* Samy Elsayed has a deep experience in methods of preparation thin films by different techniques, thermal evaporation methods, chemical vapor deposition methods, spray pyrolysis. He also has high potential experience in analysis the DT A, and DSC charts.
* He has very strong background on measurement the dc and ac electrical properties of amorphous or/and irradiation disordered semiconductors and analysis the extracted data. Also has strong background in analysis x-ray diffraction data of as prepared samples either in bulk or thin film forms**.**
* Also Samy gained strong practice in measurement the dc and ac electrical conductivity at low temperature down to 1.7K
* . In structural analysis Samy potentially working in identifying the materials have glassy or crystalline structures.
* Also Samy has good experience in using devices like differential thermal analysis, differential scan calorimetry. And optical spectrophotometer.
* Broad theoretical background in general physics, general chemistry, and mathematics.
* More than ten years of teaching experience for all physics laboratories, general physics ( Phys 101), mechanics (Phys103), electricity and magnetism (Phys 104), electrodynamics, Solid state physics, thermodynamics, atomic physics, molecular physics, Semiconductor physics, for undergrad students in addition to four years of assistant instructor for all undergraduate physics courses.

Experience in developing course curriculum and department plane as per accreditation and international standards.

* Serve as student advisor to direct and help them through their undergrad study.
* Able to work on new projects with high production rate.
* Able to cooperate in a team environment as well as working independently.
* Interact professionally and constructively with students and staff at all levels in an immersive and fast paced environment.
* Able to explain complex concepts in simple terms.
* Able to run multi-task while working independently or collaboratively with other teachers and university staff.

**Experience**

* Lecturer of physics Faculty of science, Beni-Suef Branch Cairo university, teaching underground courses, electricity and magnetism, Crystallography, introduction to solid state physics
* Lecturer of physics Sohar faculty of teachers, Ministry of high education, Sultant of Oman,
* Samy there teaching mechanics, introduction to physics principles, physics laboratory,
* Associate prof. of physics Faculty of science -University of Beni-Suef, supervised many M.Sc. thesis, teaching Semiconductor physics, solid state physics, and publish many articles in international peer review journals, in material science.
* Associate Prof. of physics in Faculty of science and arts, University of Sebha, Libya, where Samy teaching Solid State physics, waves& vibrations, statistical physics &thermodynamics, Semiconductor physics, quantum mechanics and supervised many undergraduate projects.
* Prof. of physics Faculty of Science University of Beni-Suef, where Samy Build laboratory of new materials and renewable energy.
* Supervised graduate students through their Master's thesis.
* Developed curriculum for undergraduate physics courses and department plane.

**HONORS**

* **Samy got Cairo university encouragement prize in Basic and advanced science 2004-2005**

**Teaching and supervision**

I have more than 20years of teaching experience. I taught all physics laboratories, general physics (Phys 101), mechanics (Phys103), electricity and magnetism (Phys 104), electrodynamics, Statistical and thermodynamic physics, Semiconductor physics, Crystallography, introduction to Quantum mechanics, for undergraduate students, quantum and non-linear optics for postgraduate level.

I had supervised more than 10 under graduate final year projects. For postgraduate level three master student from different universities finished his master. Also, I started supervision of two Ph.D. Students But they finished their thesis abroad.

* Undergraduate level: Final year projects

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| --- | --- | --- | --- |
| **Project title** | **Student Name** | **Year** | **Status** |
| Solar Cell  الخلايا الشمسيه | Ahmed Amseary  أحمد أمصيري | 2006 | Finished |
| Electrostatics  الكهربيه الساكنه | Asma Adam AboGrarh  أسماء أحمد ابو غراره | 2007 | Finished |
| Thermoelectric Phenomena  الظاهره الكهروحراريه | Intsar Mohamed Abdallah  أنتصار محمد عبد الله | 2008 | Finished |
| x-Ray in medical dignosing  الاشعه السينيه في التشخيص الطبي | Massouda AboKlesh  مسعودة ابو كليش | 2009 | Finished |
| Electrical conductivity  الموصليه الكهربائيه | Moftah ElGdaffi  مفتاح القذافي | 2010 | Finished |
| Solar Energy  الخلايا الشمسيه | Mona Mohamed  منى محمد | 2011 | Finished |

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| --- | --- | --- | --- |
| **Student Name** | **Thesis Title** | **University** | **Status** |
| Mohamed Karayem Zayed | Preparation and characterization of Semiconductor thin films for detection toxic and flammable gases | Cairo University | Finished  1997 |
| Ashraf Said Mohamed Hassan | Study doping efficiency on physical characteristics of Non-Crystalline Semiconductors | Ain Shams University | Finished  2003 |
| Ahmed Abdel Nagi Aboud | Physical Properties of Pure Cobalt Oxide and That incorporated with Lanthanum | Beni-Suef  University | Finished  2007 |

Courses

|  |  |  |  |
| --- | --- | --- | --- |
| Course Name | Students Lvel | University | Country |
| Condensed Matter Physics | Undergraduate 4th year | Beny-Suef University | Egypt |
| Solid state Physics (1) | Undergraduate 4th year | Beny-Suef University | Egypt |
| Solid state Physics (2) | Undergraduate 4th year | Beny-Suef University | Egypt |
| Statistical Physics | Undergraduate 4th year | Sebha University | Libya |
| Semiconductor Physics | Undergraduate 4th year | Sebha University | Libya |
| Non-Linear Optics | Postgraduate students | Beny-Suef University | Egypt |
| Condensed Matter Physics | Postgraduate students | Beny-Suef University | Egypt |

**List of Publications**

**Book chapter**” Investigation the nature of Insulator- Metal transition in neutron transmutation doped - Ge:Ga”

Published in Book entitled "Ionizing Radiation and New Technologies, ISBN 978-953-51-5638-3”

**I - Papers published in international Journals**

**1-**Characterization of nano-crystalline Co-La mixed oxide thin films prepared by the spray pyrolysis technique,

Ahmed A. Aboud, Samy Abdel-Hakim , Mostafa Ali, Hassan Afify, Neerish Revaprasadu, *Results in Physics* (2019)*,* https://doi.org/10.1016/j.rinp.2019.01.053

2**-**Synchronous γ (Co60) Photons and thermal processing induced Insulator metal transition in amorphous chalcogenide As4Se3Te3 composition

El-Sayed, S.A. & Morsy, M.A. Indian J Phys (2018) 92: 629. https://doi.org/10.1007/s12648-017-1147-

3-Fractal explanation of Meyer–Neldel rule

Samy El-sayed

Journal of Non-Crystalline Solids 458 (2017) 137–140

4-Simultaneous *γ*(Co60)-quanta irradiation and isothermal

annealing-induced insulator–metal transition in a-As4Se4Te2

chalcogenide composition

S.A. Elhakim &M. A. Morsy

Radiation Effects & Defects in Solids, 2014

<http://dx.doi.org/10.1080/10420150.2013.860974>

5-Observation compensation effect and crossover between Percolation and variable-range-hopping regimes for dc conductivity in germanium irradiated with large fluencies fast neutrons

Samy Abdelhakim Elsayed

JOURNAL OF OPTOELECTRONICS AND ADVANCED MATERIALS Vol. 16, No. 11-12, November - December 2014, p. 1367 - 1373

6- Evidence for insulator –metal transition in chalcogenide Se- Te-Ge films

S. A. El-Hakim And M. F. Kokata

Philosophical Magazine, 87, 26,4059-4071(2007)

7-Optical Properties of gamma irradiated polyamide-6 and its possible application in dosimetry

M. A. El-Ahdal, and S. Abdel-Hakim

Isotope &Rad. Res., 37, 7, 1765, (2005)

8-Electrical conductivity and crystallization kinetics of amorphous Se0.81In0.19 films

F. A. Abdel-Wahab, S. A. El-Hakim, M.F. Kotkata

Physica B, 366 (2005)38-43

9-The Characteristics of the Coulomb gap in the density of states of germanium doped irradiation defects

S. A. El-Hakim

Phys. Stat. Sol. (b), 241, 8, 1865-1871 (2004)

10-Magnetic and electric studies of a new Co (II) pervoskite-like material

M. F. Mostafa, A. A. Youssef and S. A. El-Hakim

Phase Transitions, 77, 3, 317, (2004)

11- Are the hoping theories of electrical conductivity, applicable to explain ionic conduction? The chalcogenide Se0.9In0.1composition as an example

S. A. El-Hakim

Journal of Non-Linear Phenomena in complex systems, 6, 2, 619-629, (2003)

12- DC and AC Electrical Properties of the Chalcogenide Semiconductor Se0.9In0.1

S.A. El-Hakim, F.A. El-Wahab, A.S. Mohamed and M.F. Kotkata

Phys. Stat. sol. (a) 198, 128 - 136 (2003)

13- Structural phase transition and the dielectric permittivity of the model lipid bilayer [(CH2)12(NH3)2] CuCl4.

M. F. Mostafa and S. A. El-Hakim

Phase Transitions, 76, 6, 587-599, (2003)

14- An experimental determination of the fractal dimension at the metal-insulator transition in germanium `doped’ by radiation defects

S. A. El-Hakim

Phil. Mag. B., 82, 8, (2002).

15- An experimental determination of the critical exponent at the metal-insulator transition in germanium `doped’ by radiation defects

S. A. El-Hakim

Journal of Non linear phenomena in complex systems, 3, 2, (2000)

16-Structural And Physical properties of sprayed copper- zinc oxide films

S. A. Nasser, H. H. Afify, S.A. El-Hakim , M. K. Zayed

Thin Solid films, 315(1998)327-335.

17-Spectroscopic and conductive properties of some charge transfer complexes of iodine

Sawsan Abd El khalik And Samy Abdel Hakim

Spectroscopy letters,31(2).459-467(1998**).**

18- Lattice vibrations in CuIn5S8 crystals.

N.M. Gasanly, S. A. El-Hakim, L.G. Gasanova and A. Z. Magomadov.

Physica Status Solidi (b). 158, 1, K1, (1990).

19-The effect of Tl addition on the electrical and thermal transport properties of amorphous As2Se3

M.F. Kotkata, M. H. El-Fouly, S. A. Fayek, S.A. El-Hakim

Semicon. Sci. Technol. 1, (1986)P 313.

**II - Papers Published in International conferences and workshops**

1**-**Electronic properties of crystalline Ge doped, compensated and disordered by fast reactor neutrons

S.A. El-Hakim

Proceeding of the Eighth Annual seminar of Non-Linear Phenomena in Complex Systems, Ed. L. Babichev & V. Kuvshinov, Institute of Physics, Minsk 2000, P70

2- Electrical and optical properties of copper- zinc oxide films for gas sensing applications

S. A. El-Hakim, S. A Nasser, H.H. Afify and M. K. Zayed

The XXI conference on solid state science, 23-26 Feb.1999, Mansoura, Egypt

3-Electrical conductivity of some phosphate glasses containing uranium in relation to their composition and structure.

N. Abd El Shafi, S.A. El-Hakim, S.A.,Nasser.

Fourth Euro ceramics conference Riccione (Italy) October (1995) Vol5, pp389-394

4- Structural and Optical Properties of CuO films prepared by spray pyrolysis.

H.H. Afify, S. A. Nasser And S.A. El-Hakim

First international spring school & symposium on advances in materials science 15-20 March (1994), Cairo, Egypt pp483-494

5- Preliminary investigation of some physical properties of (Ge) doped (Si)

S. A. El-Hakim, M. Ashry, M. A. Morsy

International conference on material Science and Technology, April 2-4-(2001), Beny Suief, Egypt

6- Are the hoping theories of electrical conductivity, proved to explain the electrical conductivity of Fermions, applicable to explain ionic conduction? The chalcogenide composition Se0.9In0.1 as an example

S. A. El-Hakim

The 10th International school & workshop of Non-Linear Dynamics & Complex Systems, 23-26, Sept 2002, Minsk, Belarus

7- Hole mobility in germanium transmutation doped by epicadmium neutrons

O. P. Ermolaev, T.Y. Mikulchyk, S. A. El-Hakim

Proceeding of the Fifth International Conference "Interaction of Radiation with Solids", Minsk, Belarus, October 6-9, 2003.-Minsk, (Belarus State University Publication), 2003, р. 145-147

8-Characteristics of the Coulomb's gap, near the insulator metal transition in the density of states of germanium doped irradiation defects.

S. A. El-Hakim

The workshop on material science and radiation physics, 2—22 December 2003, Faculty of Science, Assuit University, Assuit, Egypt

9- Electrical properties of lanthanum oxide doped Co3O4 films Prepared by Spray Pyrolysis Technique.

S. A. El-Hakim, M.A. Morsy, H. H. Affify\* and A. A. Aboud

The 24th Conference on solid state Physics and Material Science, &Workshop on Photonic and optoelectronic Materials,22- 26 Feb. 2004, Safaga, Red Sea, Egypt.

10- An experimental determination of the Coulomb's gap in the density of states of germanium doped irradiation defects

S. A. El-Hakim and Ali Bouba

Fourth Libyan Arab International Conference on Electrical and Electronic Engineering LAICEEE , 20-23-Mar. 2006, Tripoli, Libya

11-Electronic Properties of As Doped Crystalline Ge Compensated and Disordered by Fast reactor Neutrons

S. A. El-Hakim and Ali Bouba

The Arab Solar Energy Conference 5-7 Nov. 2006, Kingdom of Bahrain

* **Selected Professional Activities**

1-Member of International Center for Diffraction Data (ICDD)

2- Member of Egyptian Society of Materials Science.

* **Available References**

1-M. F. Mostafa Prof. of Solid state physics, Phys. Dept. Cairo University

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2- M.F. Kotkata

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