



**Sohag University**  
**Faculty of Science**  
**Depart. of Physics**



### **Curriculum Vitae**

Family Name: Aly  
First Name: Ahmed Mohamed Ahmed  
Sex: male  
Nationality: Egyptian  
Marital Status: Married

Permanent Institute: Physics Department, Faculty of Science Sohag  
South Valley University  
Sohag, Egypt

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Field of Interest: Physics- Solid state  
Semiconductor materials  
Superconductor materials  
Manganites

Education:  
B.Sc. 1983 Faculty of Science- Sohag  
M.Sc. 1989 Faculty of Science -Sohag  
Ph.D. 1993 Faculty of Science -Sohag

#### **Scientific Employment and academic Responsibility:**

Demonstrator	1983- 1989	Physics department Faculty of Science-Sohag
Lecturer Assistant	1989- 1993	Physics department Faculty of Science-Sohag
Lecturer	1993- 2001	Physics department

Professor Associate	2001 up 2006	Faculty of Science-Sohag Physics department
Professor	2006 up to now	Faculty of Science-Sohag Physics department
Head of department of physics	1-8-2011 to now	Faculty of Science-Sohag

**Activity:**            **Post doctor in Germany 27-5-200 to 27 -11-2000**  
**Visiting and Training in Slovakia 20-6- to 19-7-2009**  
**Post doctor in Spain 1-12-2013 to 30-9-2014**

- March 2007- March 2010: Member of Implementation team of "Introduction New & Up-dating Courses of Material Science" (TEMPUS JEP-32064-2004), funded by European Union.

## **research projects**

**1-Principle investigator of**  
**'Fabrication spin valve based on Manganites for technological application'**  
**from (12-2012-to-31-1-2014) from Science and Technology**  
**development Fund 1-2-2011 -31-1-2013**

**-2-Principle investigator of**  
**رفع القدرات والامكانيات العملية بكلية العلوم جامعة سوهاج**  
**الممول أكاديمية البحث العلمي والتكنولوجيا مشروع رقم 6314**  
**2022/2/21 الي 2020/5/22**

**3-Principle investigator of**  
**Development and Optimization of  $MnBi_{1-x}$  thermoelectric materials by  $Sb_x$**   
**substitution**  
**From Academy of Scientific Research and Technology 26/8/2020 to 25/2/2022.**

**4-Principle investigator of**  
**ID : (45573)**  
**titled "Enhance the performance of second-generation power devices based on**  
 **$\beta$ -Ga<sub>2</sub>O<sub>3</sub> Single Crystals" Science & Technology Development Fund**

## **Activity**

Share in "First Workshop& second workshop Introduction New & Up-dating Courses of Material Science"2008& 2009'.

- Share in "Second Workshop& Training School on Low Cost Applications of Plasma Technology in Industry and Environment" Al-Azhar University, Cairo-Egypt, 10<sup>th</sup>-15<sup>th</sup> November (2007).

**International Conferences**

- The sixteenth conference on solid state science, Jan., (1994), Meridian Cairo,(Poster).
- The XX conference on solid state science, Nov. 5-9, (1997), Luxor.
- The magnetic materials and magnetism conference in Stuttgart Germany Physmets (2001).1P164 abs (Oral)
- International Conference on Superconductivity and Magnetism in Antalya Turkey 2010(Turkey) (oral)
- International Conference on Advanced Materials World Congress" in Izmir on September 16-19, 2013. (Turkey) (poster & oral)

### **Journal's Committees or reviewers**

- Referee in Journal of -Materials Chemistry and Physics
- Referee in Journal of Low Temperature Physics.
- Referee in Journal of Smart Material and Structure.
- Referee in Physica status solidi B
- Referee in *Results in physics*
- A member of the Egyptian Society of Solid State Science.
- A member of the Committee of Graduate and Research Affairs.
- A trainer in Computer Science practical course.

### **Journal's editorial Board**

- 1- Heliyon
- 2- Material physics and Chemistry

### **Supervision of thesis:**

- Supervision of ten master thesis.
- Supervision of 5 PhD thesis.

### **Courses Taught:**

- Metals, Introduction of Msc. students, Faculty of science.
- Experimental Physics of Msc. students, Faculty of science.
- Advanced solid state, fourth year students, Faculty of science and faculty of education.
- Metals and alloys Physics, second year, Faculty of science.
- Modern Physics, Second Year, Natural Science, Faculty of science.
- Physical Optics, Second Year, Physics & Chemistry, Faculty of science.
- Alternating Current, Second Year Students, Faculty of science.
- Properties of matter, First Year Students, Faculty of Education.
- General Physics, First Year Students, Faculty of Engineering.
- Electricity, second Year Students, Faculty of Education.

- Heat, First Year Students, Faculty of Education.

### LIST OF PUBLICATION

- 1-Semimetallic Behaviour and thermoelectric Power of In Bi and  $\text{In}_{50}\text{Bi}_{37.5}\text{Sb}_{12.5}$  Alloys.** M. M. Ibrahim, E Kh. Shoker, M. M. Wakkad and A. M. Ahmed. Egypt J. sol. V 11,1(1991) 46.
- 2- Conduction Behaviour of powder compacts based on the system  $\text{YBaCuO}$ .** M. M. Ibrahim, M.M.ABD EL-Raheem, E. Kh. Shoker, N. M. Megahid and A. M. Ahmed. The sixteenth conference on solid state science, Jan., (1994), Merdian Cairo,(Poster).
- 3- Composition dependence of the D.C Electrical Resistivity of  $\text{YBaCuO}$  system.** M. M. Ibrahim, M.M.ABD EL-Raheem, E. Kh. Shoker, M. M. Wakkad and A.M. Ahmed.The sixteenth conference on solid state science, Jan., (1994), Merdian Cairo, (Poster).
- 4- Conduction Behavior and Electrical Resistivity of powder Compacts Based on  $\text{YBa}_{2.5}\text{Cu}_3\text{O}_x$ .**A. M. Ahmed Egypt J. sol. V. 19, 1, (1996) 47.
- 5- Optical properties of evaporated  $\text{Ge}_{20}\text{Se}_{80-x}\text{Te}_x$  thin films.** M.MAbd EL-Raheem, M .M. Wakkad, N. M. Megahid, A. M. Ahmed, E. Kh. Shoker& M. Dongol. J. Mater. Sci. 31(1996) 5759.
- 6- Conduction Behaviour and Thermoelectric power of Bulk Samples of the  $\text{Ge}_{40-x}\text{Sn}_x\text{Se}_{60}$  system.** M. M. Ibrahim, A. M. Ahmed and. N. M. Megahid, Indian J. Pure &Appl.Phys. V34 (1996) 172.
- 7- Effect of condition of preparation on the D.C Electrical Resistivity of  $\text{YBaCuO}$  Powder compacts.** M. M. Ibrahim, M.M.ABD EL-Raheem, E. Kh. Shoker&A. M. Ahmed. Sing, J. Phys. V13, 1, (1997) 49.
- 8- Electrical Conduction of  $\text{Te}_{20}\text{Ge}_{14}\text{Se}_{66}$ .** N. M.Megahid, A. M. Ahmed and M. M. Ibrahim. Chinese J. Physics V35, 5(1997) 595-609.
- 9- Composition, Temperature, and Bulk of dielectric Properties of  $\text{YBaCuO}$  powder Compacts.** M. M. Ibrahim, M.M. Abd EL-Raheem, E. Kh. Shoker and A. M. Ahmed. The XX conference on solid state science, Nov. 5-9, (1997), Luxor.
- 10-Dielectric properties of  $\text{GeSnSe}$  chalcogenide samples.** M.M.Ibrahim, A. M. Ahmed, N. M. Megahid& M. M. Abd EL-Raheem, Sing. J. Phys., V 13, 1, (1998) 11-25.
- 11- Effect of Pb addition on Thermoelectric Power and Microhardness of  $\text{Bi-Pb-Sr-Ca-Cu-O}$  superconductors.** M. M. Ibrahim, S. M. Khalil and A. M. Ahmed. J. Phys.&Chems.Solids, 61,(2000) 1553.
- 12- Heat Conductivity of  $\text{La}_{1-x}\text{Sr}_x\text{MnO}_3$  Surface layers.** I. El-Kassab, A. M. Ahmed, P.Mandal, K. Bearnar, A. Kattwinkel and U. Sondermann, Physica B, 305, (2001) 233.
- 13- Positive and negative magnetoresistance in mixed superexchange – double exchange systems.** K. Bearnar, P. Mandal, A. Kattwinkel, A. M. Ahmed, R. V. Helmut, J. R. Sun and G.H. RaoPhysmets (2001).1P164 abs.
- 14- Evidence for magnetic clustering around Ge-sites in fixed valence doped manganites  $\text{La}_{0.7}\text{Ca}_{0.3}\text{Mn}_{1-y}\text{Ge}_y\text{O}_3$ .** A. M. Ahmed, A. Kattwinkel, N. Hamad, K. Bearnar, J. R. Sun, G. H. Rao. H. Schicketanz, P. Terzieff and I. V. Medvedeva. J. Magn. &Magn. Mater., 242- 245 (2002) 719.

- 15-Correlation of magnetoresistance and thermoelectric power in valence-doped  $\text{La}_{0.7}\text{Ca}_{0.3}\text{Mn}_{1-x}\text{Fe}_x\text{O}_{3-\delta}$  compounds.** A.M. Ahmed, A. Kattwinkel, K. Bearnar, C. P. Yang, J. R. Sun, G. H. Rao, *Physica B*, 324, (2002) 102.
- 16- The energy gap in  $\text{Bi}_{2-x}\text{Pb}_x\text{Sr}_2\text{Ca}_2\text{Cu}_3\text{O}_y$  superconductors with  $x$  ( $0.00 \leq x \leq 0.50$ ).** A. Sedky and A. M. Ahmed. *Chinese J. Phys.* V41, 5 (2003) 511.
- 17- Heat Conductivity of valence doped  $\text{La}_{0.7}\text{Ca}_{0.3}\text{Mn}_{1-x}\text{Fe}_x\text{O}_{3-\delta}$ .** A.M. Ahmed, M. Boshta, R. Braunstein, V. Morchshakov, K. Bearnar, C. P. Yang, J. R. Sun, G. H. Rao. *J. Alloys & Compounds*, 348 (2003) 23.
- 18- Superconducting properties of  $\text{K}_{0.2}\text{Ba}_{0.5}\text{Y}_{0.3}\text{CuO}_x$  powder compacts.** A.M. Ahmed. *Indian J. Pure & Applied Phys.*, v41, (2003) 646.
- 19- Electrical transport in amorphous  $\text{Ge}_{14}\text{Se}_{86-x}\text{Te}_x$  system.** A.M. Ahmed, N. M. Megahid and M. M. Ibrahim. *Indian J. Pure & Applied Physics* 41, (2003) 863.
- 20- Recurrent behaviour of magnetisation and resistivity in Ge-substituted  $\text{La}_{0.7}\text{Ca}_{0.3}\text{MnO}_3$ .** A.M. Ahmed, V. Morchshakov, K. Bearnar, C. P. Yang, P. Terzieff, H. Schicketanz, T. Gron, J. R. Sun and G. H. Rao. *Physics Status Solidi (a)* 200, 2, (2003) 407.
- 21- Thermoelectric power and Electrical Conduction Behaviour of  $\text{Bi}_2\text{Ge}_2\text{Se}_2\text{Cu}_3\text{O}_x$ .** M. M. Ibrahim, H.A. Abd El- Ghanny and A. M. Ahmed, *Chinese J. Phys.* V42, 4-I (2004) 371.
- 22- Bi-doping effects on the transport properties in  $\text{La}_{0.7-x}\text{Bi}_x\text{Sr}_{0.3}\text{MnO}_y$ .** A.M. Ahmed. *Physica B*, 352, (2004) 330-336.
- 23-Conduction behaviour and thermoelectric power of  $\text{Ag}_x(\text{As}_{0.4}\text{Se}_{0.6})_{100-x}$  chalcogenides system.** A.M. Ahmed, N. M. Megahid, M. M. Wakkad and A. K. Diab. *J. Phys.&Chems. Solids.*, 66(2005) 1274.
- 24- Electrical conductivity and thermoelectric power of  $\text{Ge}_{40}\text{Te}_{60}$  and  $\text{Ge}_{38}\text{Sn}_2\text{Te}_{60}$  alloys.** A.M. Ahmed. *Indian J. Pure & Applied Phys.*, v 43, (2005) 535-541.
- 25- Crystal structure and some transport properties of Na-doped  $\text{LaMnO}_y$ .** A. M. Ahmed, S. A. Saleh, E. M. M. Ibrahim, and H. F. Mohamed. *J. Magn. & Magn. Mater.* 301 (2006)452.
- 26- Structural and optical properties of Ge-As-Te thin films.** S.H. Mohamed, A. M. Ahmed, M. M. Wakkad and A. K. Diab. *Eur. Phys.J. Appl. Phys.* 34(2006) 165.
- 27- Vacuum heat treatment effect on the thermophysical properties of BSCCO System.** S. M. Khalil and A. M. Ahmed *Physica C* 452 (2007) 21
- 28-Transport properties of  $\text{Ga}_{0.45}\text{In}_{0.55}\text{Sb}$**  M. M. Abd El-Raheem, M. M. Ibrahim, A. M. Ahmed, M. R. Ahmed, *Egypt. J. Solids*, Vol. (30), No. (1), (2007) 31.
- 29- The effect of annealing process on the physical properties of  $\text{La}_{1-x}\text{Na}_x\text{MnO}_y$ .** A.M. Ahmed, S.A. Saleh, E.M.M. Ibrahim, E. Bontempib, H.F. Mohamed *J. Magn. & Magn. Mater.* 320 (2008) L43.
- 30- The electrical properties of sintered compacts of  $\text{BiSnSe}_2$ .** M. M. Abd El-Raheem, M. M. Ibrahim, A. M. Ahmed, S. A. Ahmed *Egypt. J. Solids* v77 30(2008)57.
- 31- Effect of Li substitution on the resistivity and magnetoresistance of  $\text{LaMnO}_y$**  A.M. Ahmed\*, A. K. Diab, H. F. Mohamed, accepted in International Conference on Superconductivity and Magnetism 2010(Turkey)
- 32- Correlation of magnetoresistance and thermoelectric power in  $\text{La}_{1-x}\text{Li}_x\text{MnO}_y$**

**Compounds.** A. M. Ahmed\* et al J. Electromagnetic Analysis and Applications 3,(2011) 27.

**33-Effect of Li substitution on the resistivity and magnetoresistance of LaMnO<sub>y</sub>,** A. M. Ahmed\*, A. K. Diab, H. F. Mohamed, J. supercond. & Novel magnetism 24, (2011) 597.

**34- Effect of composition on transport properties of Ge<sub>10</sub>As<sub>x</sub>Te<sub>90-x</sub> chalcogenide system,**

A M Ahmed, M MWakkad, S H Mohamed\* and A K Diab, Indian J. Physics, (April 2013) 87:317–323

**35- Electronic and magnetic properties of lithium doped lanthanum manganites**

A. M. Ahmed, G. Papavasiliou, E. M. M. Ibrahim and H. F. Mohamed, Advanced Materials World Congress in Izmir on September 16-19, 2013 (Turkey) .

**36- Low- Field MR Behavior in La<sub>0.7</sub>Sr<sub>0.3</sub>MnO<sub>3</sub>/ZrO<sub>2</sub> Composite System** A. M.

Ahmed, A. K. Diab, H. F. Mohamed, Abd El-Mo'ez A. Mohamed, A. E. A. Mazen, Aml M. Mohamed, Advanced Materials World Congress in Izmir on September 16-19, 2013 (Turkey)

**37- Magnetic and Electrical properties of Lanthanum Strontium Manganites doped by Bi,** A. M. Ahmed, H. F. Mohamed, Martin Šoka, Low temp phys.

Vol. 40, N 5, (2014) 418.

**38- Synthesis and thermal stability of ZnO nanowires,** Madeha Ahmed Awad,

Eslam Mohamed Mohamed Ibrahim & Ahmed Mohamed Ahmed, J Therm Anal Calorim , 117 (2014) 635-642

**39- Enhanced electro-magnetic properties in La<sub>0.7</sub>Sr<sub>0.3</sub>MnO<sub>3</sub>/ZrO<sub>2</sub> Composites.**

AM Ahmed\*, H F Mohamed, A K Diab, Abd El-Mo'ez A Mohamed, A E A

[1] Mazen and A M Mohamed, Indian J Phys, 89 (6),(2015) 561-570

**40- Enhanced low-field magnetoresistance of La<sub>0.7</sub>Sr<sub>0.3</sub>Mn<sub>1-x</sub>Ni<sub>x</sub>O<sub>3</sub> compounds by annealing process.** A. M. Ahmed, M. A. Abedellateef, H. A. Abd El-

Ghanny, and Abd El Mo'ez A. Mohamed, Phys. Status Solidi A 212, No. 3, (2015) 623–631

**41- Magnetoresistive properties of Ni-doped La<sub>0.7</sub>Sr<sub>0.3</sub>MnO<sub>3</sub> manganites** Ahmed

Mohamed Ahmed, Abd El-Moez Ahmed Mohamed\*, Medhat Abdelrady Abdellateef, Hassan Ahmed Abd El-Ghanny, Rare Met., DOI 10.1007/s12598-015.

**42- Tuning the morphology of ZnO nanostructure by In doping and the associated variation in electrical and optical properties.** Madeha A. Awad,

E. M. M. Ibrahim & A. M. Ahmed Ceramics International 41 (2015) 10116–10124

**43- Structural, magnetic and electronic properties on the Li-doped manganites.**

A.M.Ahmed , G. Papavasiliou, H. F. Mohamed, E. M. M. Ibrahim, J. Magn.

Mag. Mat 392(2015)27–41

**44- Magnetoresistive and magnetocaloric response of manganite/insulator system,** Abd El Moez Mohamed, Victor Vega, Mihail Ipatov, Ahmed M.

Ahmed, , B. Hernando, J. all. Comp. 657 (2016) 495.

**45- The Effect of Temperature and Oxygen Flow Rate on the Morphology of ZnO Nanostructures**, M. A. Awad , A. M. Ahmed and E.M.M. Ibrahim, *Int. J. New. Hor. Phys.* **2**, No. 2, 59-61 (2015)

**45- One step syntheses of S incorporated ZnO nanowires for photocatalysis applications**, Madeha Ahmed Awada, Eslam Mohamed Mohamed Ibrahim, and Ahmed Mohamed Ahmed, *Eur. Phys. J. Appl. Phys.* **72** (2015) 30303.

**46- Annealing temperature effect on magnetic and magnetocaloric properties of manganites**, Abd El-Moez A. Mohamed, V. Vega, A. M. Ahmed, B. Hernando, *Journal of Alloys and Compounds* **665** (2016) 394-403

**47- Magnetocaloric-transport properties correlation indoped manganites** Abd El-Moez A. Mohamed, B.Hernando, A.M.Ahmed, *Solid State Communications* **233**(2016)15–17

**49- Influence of heat treatment on the magnetic and magnetocaloric properties in Nd<sub>0.6</sub>Sr<sub>0.4</sub>MnO<sub>3</sub> compound** ,M. Ahmeda , H. F. Mohameda\*, A. K. Diaba, Sara A. Mohameda.S. GarciaGrandab, D. Martínez-Blancoc. *Solid State Sciences* **57** (2016) **1-8**

**50- Effect of annealing temperature onelectrical and magnetic properties of (Nd<sub>0.6</sub>Sr<sub>0.4</sub>MnO<sub>3</sub>)<sub>1-x</sub>/(CrO<sub>3</sub>)<sub>x</sub>**, A. M. Ahmed\*, A. K. Diab, H. F. Mohamedand Sara A. Mohamed, *Int. J. New. Hor. Phys.* **3**, No. **2**, **49-53** (2016)

**51- Effect of annealing temperature on the magnetoresistive/insulator La<sub>0.7</sub>Ba<sub>0.3</sub>MnO<sub>3</sub>/NiO manganites** M. Ahmed, Abd El-Mo'ez A. Mohamed,H. F. Mohamed, A. K. Diab, Aml M. Mohamed, A. E. A. Mazen, *Low Temp. Phys.*, 2016, v. 42, No. 9, pp. 951–958.

**52- Synthesis, characterization and low field magnetotransport of Nd<sub>0.6</sub>Sr<sub>0.4</sub>MnO<sub>3</sub>/ CrO<sub>3</sub> composite**, A M Ahmed, H F Mohamed, A K Diab and S A Mohamed, *Indian J Phys* (February 2017) **91**(2):169–181

**53- Magnetic, magnetocaloric and thermoelectric properties of nickel doped manganites**, Abd El-Moez A. Mohamed , B. Hernando b, A.M. Ahmed, *J. All. Comp* **692** (2017) 381e387

**54- Tuning magnetoresistive and magnetocaloric properties via grain boundaries engineering in granular manganites**, Abd El-Moez A. Mohamed, Mohamed A. Mohamed, V. Vega, B. Hernandoband A. M. Ahmed, *RSC Advances*, **6**, (2016) 77284

**55- Electrical, thermoelectrical and magnetic properties of approximately 20-nm Ni-Co-O nanoparticles and investigation of their conduction Phenomena** , E.M.M. Ibrahim, Ahmed M. Abu-Diefb, A. Elshafaie, A.M. Ahmed, *Materials Chemistry and Physics* **192** (2017) 41-47

**56- Electric, thermoelectric and magnetic characterization of  $\gamma$ -Fe<sub>2</sub>O<sub>3</sub> and Co<sub>3</sub>O<sub>4</sub> nanoparticles synthesized by facile thermal decomposition of metal-Schiff**

base complexes, E.M.M. Ibrahim, Laila H. Abdel-Rahman, Ahmed M. Abu-Dief, A. Elshafaie, Samar Kamel Hamdan, A.M. Ahmed, *Materials Research Bulletin* **99** (2018) 103–108

57- The electric and thermoelectric properties of Cu(II)-schiff base nano-complexes,

Ibrahim, E.M.M.aEmail Author, Abdel-Rahman, L.H.b, Abu-Dief, A.M.b, Elshafaie, A.a, Hamdan, S.J

58- Thermopower and magnetocaloric properties in NdSrMnO/CrO<sub>3</sub> composites,

Ahmed, A.M., Mohamed, H.F., Paixão, J.A., Mohamed, S.A.,  
2018 *Journal of Magnetism and Magnetic Materials*  
456, pp. 217-222

59- Magnetocaloric effect, electric, and dielectric properties of Nd 0.6 Sr 0.4 Mn x Co 1-x O 3 composite

Abdel-Latif, I.A., Ahmed, A.M., Mohamed, H.F., (...), Ghozza, M., Allam, S.,  
2018 *Journal of Magnetism and Magnetic Materials* 457, pp. 126-134

60- Electric, thermoelectric and magnetic properties of Nickel (II) imine nanocomplexes,  
Elshafaie, A., Abdel-Rahman, L.H., Abu-Dief, A.M., (...), Ahmed, A.M., Ibrahim, E.M.M.  
2018 *Nano*, 13(7), 1850074

61- The synthesis of CuO and NiO nanoparticles by facile thermal decomposition of metal-Schiff base complexes and an examination of their electric, thermoelectric and magnetic Properties, Ibrahim, E.M.M., Abdel-Rahman, L.H., Abu-Dief, A.M., (...), Hamdan, S.K., Ahmed, A.M., 2018 *Materials Research Bulletin*, 107, pp. 492-497

62- Effect of NiO impurity on the magneto-transport properties of the La<sub>0.7</sub> Ba<sub>0.3</sub> MnO<sub>3</sub> granular manganite, Mohamed, A.E.-M.A., Mohamed, A.M., ElShafaie, A., (...), Diab, A.K., Ahmed, A.M., 2018, *Chemical Physics Letters*, 713, pp. 272-276

63- Impact of aluminum on the Seebeck coefficient and magnetic properties of La 0.7 Ba 0.3 MnO 3 manganites, Mohamed, H.F., Ahmed, A.M., Diab, A.K., Omar, E.Y., (2019) *Chemical Physics Letters*, 726, pp. 22-28

64- Crossover effect of Magnetotransport and Magnetocaloric Effect in



**(La<sub>0.7</sub>Ba<sub>0.3</sub>MnO<sub>3</sub>)<sub>1-x</sub>(Al<sub>2</sub>O<sub>3</sub>)<sub>x</sub>, A.M. Ahmed, H.F. Mohamed, A.K. Diab, Esraa Y. Omar, J. Magn. . Magn. Mate.489 (2019)165388**