## **CURRICULAM VITAE**

#### Sayed Yehia Sayed Ali Attia, Ph.D.

## **Assistant professor**

Mining and Metallurgy Engineering Department, Tabbin Institute for Metallurgical Studies, (TIMS). Tabbin, Cairo, Egypt, P.O. Box 109, Helwan 11421, Cairo.

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#### **Personal Information:**

Date of Birth : February 20, 1984

Marital Status : Married
Nationality : Egyptian

Mailing Address : Mining and Metallurgy Engineering, Tabbin Institute for

Metallurgical Studies, (TIMS), Tabbin, Helwan, Egypt,

P.O. Box 109, Helwan 11421, Cairo, Egypt.

Home Address : 113 El-Emam El-Leith St. El Khalefa, Cairo, Egypt.

#### **Research Experience and Education:**

Sep. 2020 – until date Assistant professor, Mining and Metallurgy Engineering

Department, Tabbin Institute for Metallurgical Studies,

(TIMS). Tabbin, Cairo, Egypt.

Dec. 2017 – Jun. 2020 Assistant Lecturer, Mining and Metallurgical Engineering

Department, Tabbin Institute for Metallurgical Studies,

(TIMS). Tabbin, Cairo, Egypt.

Aug. 2010 – May. 2017 Research Assistant, Chemical Engineering Department,

Tabbin Institute for Metallurgical Studies, (TIMS). Tabbin,

Cairo, Egypt.

Aug. 2010 – Dec. 2010 Inorganic training course, Japan International Cooperation

Agency, JICA. Technical Support for Inorganic materials and

Metals, Under the International Cooperation Program of the Government of Japan.

Sep 2006– Oct, 2007

Central lab Ain Shams University, Chemist, Cairo, Egypt.

## **Academic Record:**

Degree	Subject taken	Board/College/University	Date of Approval	Marks
B. Sc.	Chemistry	Faculty of Science, Ain Shams University, Egypt.	Jun 2005	75.00%
M. Sc.	Physical, Analytical and Inorganic Chemistry	Faculty of Science, Ain Shams University, Egypt.	Sep 2016	Awarded
Ph.D	Chemistry (Material Chemistry- Nano Technology- Energy storage applications- Supercapacitors)	Faculty of Science, Ain Shams University, Egypt.	July 2020	Awarded

- \* <u>Title of the Master Thesis:</u> "Corrosion behavior of Galvanized steel in aqueous solutions"
- ❖ <u>Title of the Doctoral Thesis:</u> "Synthesis of Nanostructures of some Transition Metal compounds for Energy Storage Applications"

### **Research and Technical Skills:**

- Synthesis and characterization of nanostructured materials for energy storage/conversion applications.
- Synthesis of metal oxides, hydroxides, chalcogenides and their carbon composites using different synthetic routs such as: hydrothermal/solvothermal, microwave, precipitation, electrodeposition, ......etc).
- Electrochemical applications of the prepared novel nanostructured materials for Energy related field such as Supercapacitors and Lithium ion battery.
- Electrochemical characterization techniques such as, cyclic voltammetry, Chronoampero-potentiometry, Galvanostatic charge-discharge, and Electrochemical Impedance spectroscopy (EIS).
- Structural characterization by TEM, EDS, SEM, XPS, XRD, FTIR, Raman, and BET.

## **Current Research Interest:**

 Synthesis and characterization of new materials such as Metalorganic Framework and its applications in energy storage and conversion systems such as supercapacitors, batteries and electrochemical water splitting.

## **List of Publications**

https://scholar.google.co.kr/citations?user=XNbZ1usAAAAJ&hl=en https://www.scopus.com/authid/detail.uri?authorId=55912795700

- Detergent-free micelle-assisted synthesis of carbon-containing hexagonal CuS nanostructures for efficient supercapacitor electrode materials, *Electrochimica Acta 407 (2022) 139918*
- 2. MoS<sub>2</sub>-based nanocomposite; synthesis, structure, and applications in water remediation and energy storage: a review, *Environmental chemistry letters 19* (5), 3645-3681, 2021
- 3. Supercapacitor electrode materials: addressing challenges in mechanism and charge storage, *Rev Inorg Chem* 2022; 42(1): 53–88.
- 4. High electrochemical energy-storage performance promoted by SnSe nanorods anchored on rGO nanosheets, *Journal of Electroanalytical Chemistry* 883 (2021) 115063
- 5. Polyvinylpyrrolidone and freeze drying-assisted growth of an α-Ni(OH)<sub>2</sub>/reduced graphene oxide hybrid structure as a superior electrode material for supercapacitors, *New J. Chem.*, 2021, 45, 10012.
- 6. High electrochemical performance of rGO anchored CuS nanospheres for supercapacitor applications, *J. Energy Storage* (2020) 102001.
- 7. A single-step synthesis and direct growth of microspheres containing the nanoflakes-like structure of Zn<sub>0.76</sub>Co<sub>0.24</sub>S as a high-performance electrode for supercapacitors, *Journal of Energy Storage*, 2020, 29, 101349

- 8. Facile Synthesis of Mn<sub>3</sub>O<sub>4</sub>-rGO Nanocomposite As an Efficient Electrode Material for Application in Supercapacitors, *Journal of Electronic Materials* 2019, 48 (8), 4977-4986.
- 9. Hydrothermal Synthesis of α-MnS Nanoflakes@Nitrogen and Sulfur Co-doped rGO for High-Performance Hybrid Supercapacitor, *ChemistrySelect 2018*, *3*, *6061*.
- Spinel-structured FeCo<sub>2</sub>O<sub>4</sub> Mesoporous Nanosheets as Efficient Electrode for Supercapacitor Applications, *Microporous and Mesoporous Materials*, 2017, 251, 26.
- 11. One-Step, Calcination-free Synthesis of Zinc Cobaltite Nanospheres for High-Performance Supercapacitors, *Materials Today Energy*, 2017, 4, 97.

## **Awards**

- 1) The best Ph D Poster Award, Department of Chemistry, The First Sceintific Reaserch Symposium of Faculty of Science- Ain Shams University, Dec 27<sup>th</sup>, 2018.
- 2) The Best research awarded, the 13<sup>th</sup> International conference on sustainable green construction and Nano-Technology (NTC 2022)

# **List of Awarded Funded Projects**

- Young Researchers Grant (STDF-YRG), STDF-Youth, Fabrication of Nanostructured-Transition Metal Sulfides for High-Performance Supercapacitors, ID 33480, 2019.
- 2. Reintegration Grants (STDF-RG), STDF-Youth Project, Synthesis of Selenium, Metal Selenides and their Carbon-composites: Toward High-Performance Cathode Materials for Li-Se Battery as a Practical Candidate for Energy-Storage, ID 35971, 2020.





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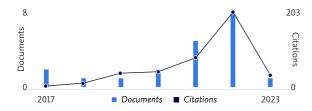
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Article

Microwave-assisted fabrication of  $SnO_2$  nanostructures as electrode for high-performance pseudocapacitors

Gaber, A., Attia, S.Y., Salem, A.M.S., Mohamed, S.G., El-Hout, S.I.

Journal of Energy Storage, 2023, 59, 106358

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Article

A three-dimensional directly grown hierarchical graces-like Nickel Manganese Selenide for high-performance Li-ion battery and supercapacitor electrodes

Abuelftooh, A.M., Fayed, M.G., Attia, S.Y., ... Tantawy, N.S., Mohamed, S.G.

Materials Today Chemistry, 2022, 26, 101187

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Edited with the trial version of Snow crystal-like structure of NiSe as a binder-free electrode for Foxit Advanced PDF 4ditor high-performance hybrid supercapacitor To remove this noticeCitations Bekhit, S.M., Mohamed, S.G., Ghayad, I.M., ... Abdel-Karim, R., El-Raghy, S.M. Journal of Materials Science, 2022, 57(22), pp. 9955-9970 Show abstract V Related documents

Article

High-performance electrode materials for supercapacitor applications using Ni-catalyzed carbon nanostructures derived from biomass waste materials

Geioushy, R.A., Attia, S.Y., Mohamed, S.G., Li, H., Fouad, O.A.

Journal of Energy Storage, 2022, 48, 104034

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Detergent-free micelle-assisted synthesis of carbon-containing hexagonal CuS nanostructures for efficient supercapacitor electrode materials

Attia, S.Y., Mohamed, S.G.

Electrochimica Acta, 2022, 407, 139918

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Supercapacitor electrode materials: Addressing challenges in mechanism and charge storage

Attia, S.Y., Mohamed, S.G., Barakat, Y.F., Hassan, H.H., Zoubi, W.A.

Reviews in Inorganic Chemistry, 2022, 42(1), pp. 53-88 Show abstract  $\vee$ Related documents

Article

From waste to value-added products: Evaluation of activated carbon generated from leather waste for supercapacitor applications

El-Hout, S.I., Attia, S.Y., Mohamed, S.G., Abdelbasir, S.M.

Journal of Environmental Management, 2022, 304, 114222

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Facile one-step hydrothermal method for NiCo<sub>2</sub>S<sub>4</sub>/rGO nanocomposite synthesis for efficient hybrid supercapacitor electrodes

Abdel-Salam, A.I., Attia, S.Y., El-Hosiny, F.I., ... Mohamed, S.G., Rashad, M.M.

Materials Chemistry and Physics, 2022, 277, 125554 Show abstract  $\vee$ Related documents

Article • Article in Press

Designing a hierarchical structure of nickel-cobalt-sulfide decorated on electrospun N-doped carbon nanofiber as an efficient electrode material for hybrid supercapacitors

Abdel-Salam, A.I., Attia, S.Y., Mohamed, S.G., ... Sadek, M.A., Rashad, M.M.

International Journal of Hydrogen Energy, 2022 Show abstract  $\vee$ Related documents

Review • Open access

MoS<sub>2</sub>-based nanocomposites: synthesis, structure, and applications in water remediation and energy storage: a review

Abdel Maksoud, M.I.A., Bedir, A.G., Bekhit, M., ... Al-Muhtaseb, A.H., Rooney, D.W.

Environmental Chemistry Letters, 2021, 19(5), pp. 3645-3681

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### **References:**

#### 1. Professor Hamdy H. Hassan,

Professor of physical chemistry, Faculty of science,

Ain Shams uneversity

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#### 2. Professor Nageh K. Allam,

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#### 3. Professor Mohamed Rashad,

Prof, Central Metallurgical Research and Development Institute (CMRDI)

Material science and engineering, advanced material, Nanomaterilas, and electronic materials.

Tel: 01117901877

E-mail: rashad133@yahoo.com

#### 4. Associate. Prof. Saad Gomaa Mohamed,

Ph.D. Researcher and Lecturer, Mining and Metallurgical engineering Department, Tabbin Institute for Metallurgical Studies (TIMS).

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# كلية العلوير—قسم الكيمياء

Hamdy H. Hassan Professor of Physical Chemistry email: hamdihh@sci.asu.edu.eg Tel: +2 012 246-591-96 Fax.: + (202) 2483-183

## **To Whom It May Concern**

It is a genuine pleasure for me to give my highest recommendation for Dr. Sayed Yehia Attia. I have known Sayed for more than 5 years in my role as Ph.D. thesis advisor. Sayed showed a great passion and creativity during his presence in my research group. From his Ph.D. work we published four papers in national recognized journals:

- 1. <u>S. Y. Attia</u>, Y. F. Barakat, H. H. Hassan, S. G. Mohamed, A single-step synthesis and direct growth of microspheres containing the nanoflakes-like structure of Zn<sub>0.76</sub>Co<sub>0.24</sub>S as a high-performance electrode for supercapacitors, *Journal of Energy Storage*, 2020, 29, 101349
- 2. <u>S. Y. Attia</u>, S. G. Mohamed, Y. F. Barakat, H. H. Hassan, W. Al Zoubi, Hydrothermal Synthesis of α-MnS Nanoflakes@Nitrogen and Sulfur Codoped rGO for High-Performance Hybrid Supercapacitor, *ChemistrySelect* **2018**, 3, 6061
- 3. S. G. Mohamed, <u>S. Y. Attia</u>, H. H. Hassan, Spinel-structured FeCo<sub>2</sub>O<sub>4</sub> Mesoporous Nanosheets as Efficient Electrode for Supercapacitor Applications, <u>Microporous and Mesoporous Materials</u>, **2017**, 251, 26.
- 4. S. G. Mohamed, <u>S. Y. Attia</u>, N. K. Allam, One-Step, Calcination-free Synthesis of Zinc Cobaltite Nanospheres for High-Performance Supercapacitors, <u>Materials Today Energy</u>, **2017**, 4, 97.

The extraordinary qualifications of Sayed allowed him to finish his Ph.D. entitled "Synthesis of nanostructured of some transition metal compounds for energy storage applications" with a great record.

Dr. Sayed has a pleasant personality and always give good impression for all. He is a hard-working, dedicated and independent person.

As a summery, having this elevated level of motivation allowed Dr. Sayed to be clearly one of the best graduated students I have seen during the last 10 years. Even though I hope he stays here, I think he would be an outstanding candidate to your R&D center. I give him my highest recommendation.

Sincerely,

Hamdy H. Hassan

Dear, professor,

This is Sayed Yehia Attia, Assistant professor, Egyptian,

Mining and Metallurgy Engineering Department, Tabbin Institute for Metallurgical Studies, (TIMS). Tabbin, Cairo, Egypt, P.O. Box 109, Helwan 11421, Cairo.

I am writing to you to express my interest in applying for this postdoc opportunity to contribute in project for synthesis, fabrication, characterization, and electrochemical evaluating of novel high-energy nanostructured materials for energy storage systems such as supercapacitors and batteries, 2022.

My undergraduate studies covered all topics of theoretical and practical chemistry in its three parts: organic, inorganic, and physical chemistry.

Since I graduated, I have been working in the electrochemistry field. I have got a wide experience and knowledge in research and industrial fields together. Basic experience with material fabrication (synthesis, processing and treatment)

By 2017, I got a Ph.D in Chemistry, "Ain Shams University" and my subject of study was about the synthesis of nanostructures of transition metal compounds and its electrochemical applications in energy storage devices, especially supercapacitors.

During the Ph.D, I had the chance to get good experience of using characterization techniques such as SEM, XRD, XPS, FTIR, Raman, TEM, and EDX.

Up to now, I have published more than twelve scientific papers four of them as a first author and all of them are in high-impacted international journals. All of my publications are subjected to synthesis of nanomaterilas and exploring its electrochemical response as electrode materials for applications in supercapacitors and batteries.

My professional goal is to become a consultant in the field of electrochemistry and its energy storage applications. I strongly intend to enhance my theoretical knowledge, and ultimately, turn this knowledge into practice. Searching for an academic center filled with academic and research opportunities.

Therefore, I would like to gain deeper principles and practical skills to start and manage innovative and appropriate projects, and I hope someday I can help not only my country but also humanity at all to develop safely and efficiently in this field. Thus, it is my desire to play a role in such sophisticated scientific research through special knowledge and that I can gain by studying this field in your respectable center.

I believe that my work experience in a big institute specialized in metallurgical studies as assistant professor has given me a great technical experience in the characterization techniques and electrochemical instruments. I am a good team player; I enjoy sharing ideas, providing feedback, supporting and motivating others.

Finally, the main objective is carrying out my research in one of the following areas nanomaterials, energy related systems, supercapacitors, and/or lithium ion batteries,, and I think they meet your research area are as I have read in your page.

Thank you for considering my application and I am looking forward to getting acceptance letter from you as a supervisor.

Yours Sincerely,