CURRICULUM VITAE

Name: **Yasser Attia Attia Awad Khalifa**
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Date of birth: Aug 15, 1980 **Place of Birth:** Qaliubiya -Egypt
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Occupation: Associate Professor of Physical Chemistry **(NanoChemistry)**
Institution: Department of Laser in Meteorology, Photochemistry & Agriculture (LAMPA), National Institute of Laser Enhanced Sciences, Cairo University, Giza, 12613, Egypt

Higher Education:

- **Doctor Degree (PhD) with the title¨** Directed wet-chemical synthesis of metallic nanoparticles of different sizes and shapes: control mechanisms¨ in Department of physical chemistry of Faculty of Chemistry, Santiago de Compostela University, Spain, Feb. 2012, Excellent with honor grade.
- Approval of the degree of Bachelor and the degree of Master from MINISTRY OF SCIENCE AND INNOVATION-Spain - 2009.
- Master degree (MSc) in Laser in photochemistry, photobiology and Nanotechnology - National Institute of Laser Enhanced Sciences -Cairo University- Nov. 2006. "Nanocoating of metallic nanocrystalas: study of the effect of crystal shape and shell thickness in optical properties"
- Diploma degree in Laser in photochemistry and photobiology - National Institute of Laser Enhanced Sciences -Cairo University- Excellent grade- 2003.
- Bachelor degree- chemistry department-faculty of science- Cairo University- very good grade- 2001.

Professional Experience:

- Assistant Teacher, NILES, Cairo University, Egypt (2003-2006).
- Instructor, NILES, Cairo University, Egypt (2006-2012).
- Researcher, Physical Chemistry Department, Faculty of Chemistry, Santiago de Compostela University, Spain (2007-2009)
- PhD Scholarship, Physical Chemistry Department, Faculty of Chemistry, Santiago de Compostela University, Spain (2009-2012)

- **Assistant Professor**, NILES, Cairo University, Egypt (2012-2017).
- Head of the R&D department, Nanotech-Egypt company, Bahgat Group, Egypt (2012-2014).
- Postdoc, Faculty of Chemistry, Santiago de Compostela University, Spain (2014-2015)
- **Assistant Professor**, Faculty of Sciences, Taif University, KSA (2015-2016).
- Member of the Nanotechnology Committee of the Standards and Quality Authority (2016-present)
- LAMPA department coordinator (2016-present).
- NARD-TECH Founder for research and development in Nanotechnology applications (2017-Now).
- Associate Professor, NILES, Cairo University, Egypt (2017-Now).

Courses taught:

-Surface Chemistry and Catalysis. -Molecular photochemistry.
-laser induced chemistry. - Nanochemistry.
-Nanobiotechnology. - Applications in Nanotechnology.
- Nuclear Chemistry. – Industrial Chemistry

Attended conferences and workshops:

- 5th International conference on laser Applications (ICLA, 10th-14th January, 2005, Cairo)
- 5th Southern Europe School of the European physical Society (SES V, March 2005, Cairo)
- 9th International Conference on Solar Energy and Applied Photochemistry (Solar'06)
- 6th International Workshop on Environmental Photochemistry (ENPHO'06, 23rd -26th January 2006, Cairo, Egypt)
- Workshop on Photodynamic Therapy (PTD): Diagnosis and Therapy, 19th- 20th March, 2007, GUC Campus, Cairo, Egypt.
- Oral presentation and Organizer in The First International Workshop on Lasers and Nanotechnology and their Applications, 7th-11th January 2007, Cairo, Egypt.
- Oral presentation and Organizer in The Sixth International Conference on Laser Science and Applications (ICLSA 06), 15th- 18th January 2007, Cairo, Egypt.
- Oral presentation and Poster in NanoTech Insight 2007 Conference, 10th-17th March, 2007, Luxor, Egypt.
- Attended international conference V Reunión del Grupo Especializado de Física del Estado Sólido (GEFES), 6th -8thFebruary 2008, Santiago de Compostela University, Spain.
- Attended international conference ¨La información de salud y medicina al ciudadano en la era de la comunicación digital¨ Martes clínico 2008 en nanotechnoligia, 4th March 2008, Santiago de Compostela University, Spain.
- Abstract, Poster and Attended the international conference¨ Fluoromag Symposium: Nanodots &Diagnostics¨27-29 March 2009, Santiago de Compostela University, Spain.
- Abstract, Poster and attendance approval of the first international conference COLL 2011, Amsterdam, Netherland - May 2011.

- Abstract, Poster and attendance approval of 4th International Colloids Conference, 15-18 June 2014, Madrid, Spain.
- Oral presentation in ICLA9, Cairo 11-13 Nov. 2016.
- Attended symposium "Future prospects for scientific cooperation between Egypt and India in the field of renewable energy", April 2018, NRC, Egypt.
- Oral presentation in the National Conference for Investment in Water Technology, Egypt, 10-11/09/2018.

Awards received:

- Wining a PhD-scholarship from the Egyptian government to Spain, 2009.
- Candidate for the best PhD in USC- Spain 2012.
- Scientific Publication Award, Cairo University, Egypt for the years 2014, 2015, 2016, 2017 and 2018.
- Prize for the best research project in the National Conference for Investment in Water Technology, Egypt, 10-11/09/2018.

Membership of professional organizations:

- Royal Society of Chemistry (RSC)
- International Nanoscience Community (Nanopaprika).
- American chemistry society (ACS).
- IEEE Advancing Technology for Humanity.
- Academia.edu
- Danish Chemical Society.
- Society of Chemical Industry (SCI)

Scientific referees for International Scientific Journals:

- Current Organic Chemistry.
- Materials Chemistry and Physics.
- RSC Advances.
- Nanoscience & Nanotechnology-Asia.
- Renewable & Sustainable Energy Reviews
- Springer Nature.
- Journal of Nanostructure in Chemistry
- Current Nanoscience
- Inorganic and Nano-Metal Chemistry
- International Journal of Environmental Science and Technology
- Photochemistry and Photobiology
- Progress in Energy & Fuels (Editorial Team)

Computer Skills:

- IT Training Program (Super User Project) in Office Administration Track in IBM center 2004, and TEM/STM/AFM training in Santiago de Compostela University, Spain 2009.

Languages:

Arabic: Native language.
English: Very good
Spanish: Very good

List of Publications:

Books:

- Book, Photothermal Stability and Hot Carriers of Gold Nanostructures, 2015, LAP LAMBERT Academic Publishing, Editor: **Yasser Attia Attia**, ISBN: 978-3-659-80976-7.
- Book, Fabrication of Carbon Nanotubes from Recycled Plastic Bags, Tariq A. Altalhi and **Yasser Attia Attia**, 2016, LAP LAMBERT Academic Publishing, ISSN: 978-3-659-88348-4.
- Book, Biosystems Engineering and its Applications, Mohamed Samer, Essam M. Abdelsalam, **Yasser Attia Attia**, Abdallah S. Ali, Rania S. Yousef and Maryam E. Faried, 2017, LAP LAMBERT Academic Publishing, ISBN: 978-3-330-32492-3.

Patents:

- International Patent in Scientific Research Academy with number 278/2017 with title " A method for maximizing biogas production by using laser radiation and nanoparticles".
- International Patent in Scientific Research Academy with number 1649/2018 with title " Novel and Efficient Approach for Drugs Fraud Detection Using Nanotechnology".

Projects:

- LSHB-CT-2006-037465, Multiparameter sensing for high sensitivity diagnostics using fluorescent and magnetic nanoparticles (FLUOROMAG) from 10/2007 to 10/2008, Santiago de Compostela University, Spain.
- CSD2006-00012, "Nanotechnologies in Biomedicine (CONSOLIDER-INGENIO)", led by Prof. Manuel Arturo López Quintela from 10/2007 to 10/2009 and from 2/2011 to 8/2011, Santiago de Compostela University, Spain.
- 5065. DJ88.64100, Catalytic properties of atomic clusters of elemental metals, from 03/2012 to 07/2012, Santiago de Compostela University, Spain.
- 1/ 436 / 4521, Photobiosynthesis of Metal/Graphene Nanocomposites: New Economic Materials for Water Desalination and Purification, 4/2014 to 1/2015, Taif University, KSA.
- Implementation of nanotechnology to improve the efficiency of microbial fuel cells for bioelectricity generation from wastewater, 2018, Cairo University, Egypt.
- Application of laser and nanotechnology to increase biodiesel production from algae, 2018(Accepted), STDF, Egypt.
- Bioethanol production from agricultural wastes: Implementation of laser and nanotechnology, 2018(Accepted), STDF, Egypt.
- Biohydrogen production from agricultural wastes by photofermentation using laser radiation, 2018, Cairo University, Egypt.

Peer-reviewed journals:

2018:

✦ Evaluation of magnetic nanoparticles influence on hyaluronic acid production from *Streptococcus equi*, **Yasser A. Attia**, Mohamed Kobasi and Mohamed Samer, Carbohydrate Polymers, 2018, 192, 135-142. **(IF= 5.158**)

✦ One Step Synthesis of Photoluminescent Catalytic Gold Nanoclusters Using Organoselenium Compounds, **Yasser A. Attia** and Shams Abdel-Hafez, New Journal of Chemistry, 2018, 42(12), 9606-9611. (**IF= 3.201**)

✦ Silicon-Grafted Ag/AgX/rGO Nanomaterials (X= Cl or Br) as Dip-Photocatalysts for Highly Efficient p-Nitrophenol Reduction and Paracetamol Production, **Yasser A. Attia** and Yasser M. A. Mohamed, Applied Organometallic Chemistry, 2018, **DOI:**10.1002/aoc.4757. **(IF= 3.581)**

✦ Effects of Laser Irradiation and Ni Nanoparticles on Biogas Production from Anaerobic Digestion of Slurry, E. M. Abdelsalam, M. Samer, **Y. A. Attia**, M. A. Abdel‐Hadi, H. E. Hassan and Y. Badr, Waste and Biomass Valorization, 2018, Doi:10.1007/s12649-018-0374-y. (**IF= 1.874**)

✦ Electrochemical study of UV-erosion of Au nanorods by silver nanoclusters (NCs) allows the construction of a NC-sensitized photovoltaic cell, Kallol Mohanta, **Yasser Attia Attia**, David Buceta, Angel Pérez-Mariño, M. Carmen Blanco, M. Arturo López-Quintela and José Rivas, Applied Nanoscience, 2018, 8(7), 1641–1648, DOI: 10.1007/s13204-018-0840-7. (**IF= 2.951**)

✦ Photoinduced one-pot synthesis of hydroxamic acids from aldehydes through in-situ generated silver nanoclusters, Yasser M. A. Mohamed, **Yasser A. Attia** and Eirik Johansson Solum, Research on Chemical Intermediates, 2018, 44(12), 7173–7186, DOI: 10.1007/s11164-018-3549-z. (IF= **1.674**)

✦ Re-evaluation of Lubricant Oil Specifications Using Surface Modified sub-nm Alumina Nanoadditives, Shimaa Elsayed, **Yasser A. Attia**, Mona Bakr and Elsayed A. ElSherbini, Nanoscience & Nanotechnology-Asia, 2018, 8(2), 255-260. (IF= **0.61 Scopus**)

✦ Photo-Biosynthesis and Biological Evaluation of Silver Chloride Nanoparticles Using *Pseudomonas aeruginosa* and *Rhizobium leguminosarum*, Hanaa M.S. Ibrahim, Mahmoud W. Sadik, **Yasser A. Attia** and Michael R. Gohar, Bioscience Research, 2018, 15(3),1892-1904. (IF= **0.949-Scopus**)

2017:

✦ Metal clusters: New era of hydrogen production, **Yasser A. Attia** and Mohamed Samer, Renewable and Sustainable Energy Reviews, 2017, 79, 878–892. (IF= **9.184**)

✦ Biodiesel production from microalgae: Processes, technologies and recent advancements, M. Elsayed, E. Abdelsalam, R. Youssef, M. Samer, **Y.A. Attia** and A. S. Ali, Renewable and Sustainable Energy Reviews,2017, 79, 893–913. (IF= **9.184**)

✦ Effects of Co and Ni nanoparticles on biogas and methane production from anaerobic digestion of slurry, E. Abdelsalam, M. Samer, **Y.A. Attia**, M.A. Abdel-Hadi, H.E. Hassan and Y. Badr, Energy Conversion and Management, 2017, 141, 108–119. (IF= **6.377**)

✦ Influence of zero valent iron nanoparticles and magnetic iron oxide nanoparticles on biogas and methane production from anaerobic digestion of manure, E Abdelsalam, M Samer, **YA Attia**, MA Abdel-Hadi, HE Hassan and Y Badr, Energy, 2017, 120, 842-853. (IF= **4.968**)

✦ Low-cost synthesis of titanium dioxide anatase nanoclusters as advanced materials for hydrogen photoproduction, **Yasser A. Attia** and Tariq A. Altalhi, Research on Chemical Intermediates, 2017, 43(7), 4051-4062. (IF= **1.674**)

✦ Facile Production of Vitamin B3 and Other Heterocyclic Carboxylic Acids Using an Efficient Ag/ZnO/Graphene-Si Hybrid Nanocatalyst, **Yasser A. Attia**, Carlos Vázquez- Vázquez and Yasser M. A. Mohamed, Research on Chemical Intermediates, 2017, 43 (1), 203-218. (IF= **1.674**)

✦ Inhibitory Effects of Salicylic Acid and Silver Nanoparticles on Potato Virus Y Infected Potato Plants in Egypt, Manal A. El-Shazly, **Yasser A. Attia**, Farida F. Kabil, Emad Anis and Mohamed Hazman, Middle East Journal of Agriculture Research, 2017, 6(3), 835-848.

2016:

✦ Comparison of nanoparticles effects on biogas and methane production from anaerobic digestion of cattle dung slurry, E. Abdelsalam, M. Samer, **Yasser A. Attia**, M.A. Abdel- Hadi, H.E. Hassan and Y. Badr, Renewable Energy, 87, 592e598, 2016. (IF= **4.9**)

✦ Gold Nanorod Synthesis Catalysed by Au Clusters, **Yasser A. Attia**, Carlos Vázquez- Vázquez, M. Carmen Blanco, David Buceta and M. Arturo López-Quintela, Faraday Discussions, 191, 205-213, 2016. (IF= **3.427**)

✦ Photo-Extracellular Synthesis of Gold Nanoparticles Using Baker's Yeast and Their Anticancer Evaluation against Ehrlich Ascites Carcinoma Cells, **Yasser A. Attia**, Yassmeen E. Farag, Yasser M. A. Mohamed, Akaber T. Hussien and Tareq Youssef, New Journal of Chemistry, 40 (11), 9395-9402, 2016. (IF= **3.201**)

✦ Ag/ZnO/graphene-TBSCl hybrid nanocomposite as highly efficient catalyst for hydrogen production, **Yasser A. Attia,** Materials Express,6(3), 211-219, **2016**. (IF= **1.597**)

✦ Fabrication and characterization of sulfur and phosphorus (S/P) co-doped carbon nanotubes, Tariq Altalhi, Amine Mezni, Ali Aldalbahi, Arwa Alrooqi, **Yasser A. Attia**, Abel Santos and Dusan Losic, Chemical Physics Letters, 658, 92–96, 2016. (IF= **1.686**)

✦ Photobiosynthesis of metal/graphene nanocomposites: new materials for water desalination and purification, **Yasser A. Attia**, Yasser M.A. Mohamed and Tariq A. Altalhi, Desalination and Water Treatment, 57 (54), 26014-26021, 2016. (IF= **1.383**)

2015:

✦ Photostability of gold nanoparticles with different shapes: role of Ag clusters, **Yasser A. Attia,** David Buceta, Félix G. Requejo, Lisandro J. Giovanetti and M. Arturo López-Quintela, Nanoscale, 7, 11273-11279, 2015. (IF= **7.233**)

✦ Transformation of Gold Nanorods in Liquid Media Induced by nIR, Visible, and UV Laser Irradiation, **Yasser A. Attia,** M. Teresa Flores-Arias, Daniel Nieto, Carlos Vázquez-Vázquez, Germán F. De La Fuente and M. Arturo López-Quintela, J. Phys. Chem. C, 119 (23), 13343–13349, 2015. (IF= **4.484**)

✦ Thermal Stability and Hot Carrier Dynamics of Gold Nanoparticles of Different Shapes, **Yasser A. Attia,** Tariq A. Altalhi, Adil A. Gobouri, Advances in Nanoparticles, 4, 85-97, 2015. (IF= **1.2**)

2014:

✦ Structure-Directing and High-Efficiency Photocatalytic Hydrogen Production by Ag Clusters, **Yasser A. Attia,** David Buceta, Carmen Blanco-Varela, Mona B. Mohamed, Giampaolo Barone, M. Arturo Lopez-Quintela, J. Am. Chem. Soc., 136, 1182−1185, 2014. (IF= **14.357**)

2011:

✦ **Y.A. Attia**, C. Vázquez-Vázquez, M. C. Blanco, M.A. López-Quintela, Metal clusters: A key missing point in the synthesis of gold nanorods, Colloids and Materials conference, 0347, P1.79, 2011.

2009:

✦ On the mechanism of the shape controlled synthesis and stabilization of gold nanoparticles by the seed-mediated method, **Y. A. Attia**, M. Bakr, M. A. Lopez-Quintela, Conference: Fluoromag Symposium: Nanodots &Diagnostics, At Santiago de Compostela.

2008:

✦ UV-Irradiation Induced Shape Changes of Gold Nanoparticles, Acta Materialia S. El-Shirbini, **Y. Attia** and Mona Mohamed, Nano Science & Nano Technology: An Indian Journal 2(1)20-24, 2008.

2007:

✦ Shape controlled synthesis of gold nanoparticles, **Y. Attia**, M. Bakr and S. AlSherbini, Conference: NanoTech Insight 2007 Conference, At Luxor, Egypt.

Under publications:

There are 11 manuscripts under revision and publications.

Summary of research and research plan:

- Synthesis of new materials such as high quality metallic, magnetic and semiconductor nanocrystals of different shapes (rods, spheres, hexagonal, and triangles, tetrapods, nanochain and nanocubes), and modification of the surface properties to functionalize them for different nanotechnological applications.

- Synthesis of heterogeneous nanocatalysts for organic transformations (Pharmaceutical compounds production) and renewable energy applications (hydrogen and biogas production).

- Synthesis of photo-nanocatalysts for CO_2 and NO_x conversion for valuable compounds.

- Implementation of the prepared nanomaterials in potential applications (industrial, medical and environmental applications).

- Characterization of these nanocrystals using TEM, SEM, EDS, X-ray diffraction, UV-Visible Absorption, Florescence and FTIR measurements.

- Studying the optical properties and the ultrafast optical dynamics of these particles and their dependence on size, shape, surface properties and the surrounding matrix using femto-second spectroscopic techniques such as pump-probe technique.

References:

1- Prof. Carlos Vázquez Vázquez
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