CURRICULUM VITAE

Dr. Md. Abdul Mottalib
Professor (Chemistry), Institute of Leather Engineering and Technology, University of Dhaka

- ♦ DAAD (German Academic Exchange Program) Fellow, Germany
- ♦ Postdoc Fellow of the Royal Society of Chemistry, England
- ♦ Postdoc Fellow of the Swedish Science Research Council, Sweden
- ♦ Visiting Scientists of Lund University, Sweden (Funded by Swedish International Development Cooperation Agency, SIDA)

Published 61 Research articles in peer-reviewed journals, **reads** 21,000 and **citations** 629, RG-22.54 **(h** index-18)

Cell- +8801757306511 (M). **E-mail:** abdul.mottalib@du.ac.bd; dr.mottalib@gmail.com

Research & Education:

Postdoctoral Research Associate October 2009 to June/2011	**:**	Niigata University of Pharmacy and Applied Life Science, Japan with Prof. Takumichi Sugihara. **Field of research**: Medicinal Chemistry- design and development for multi-step organic reactions and Cobalt-based alkynes derivatives in the respect of asymmetric catalysis for chiral drug synthesis.
Postdoctoral Research Associate October 2008 to Sept. 2009	**:**	Lund University, Department of Chemistry, Center for Chemistry and Chemical Engineering, Box 124, SE-221 00 Lund, Sweden with Prof. Ebbe Norlander. **Field of Research**: Medicinal Chemistry- Synthesis and characterization of chiral and prochiral phosphine based Co, Rh, Ru complexes and to investigate their catalytic behaviour in Asymmetric catalysis specially in respect of chiral molecule synthesis.
Visiting Scientist, 2004	**:**	Lund University, Sweden with Prof. Ebbe Norlander **Field of Research -** Organometallic Catalysis.
Postdoctoral Research: 2002		Lund University, Sweden with Prof. Ebbe Norlander **Field of Research**: Medicinal Chemistry- Synthesis and characterization of chiral and prochiral phosphine based cobalt complexes and to investigate their catalytic behavior in Asymmetric catalysis specially in Pauson-Khand reaction. And Synthesis and characterization of model compounds related to Hydrodesulphurization (HDS) and Hydrodenitrogenation (HDN) Processes. HDS and HDN are the processes whereby sulfur and nitrogen are removed respectively from crude petroleum during refining to fuels and petrochemicals feedstocks.
Visiting Scientist 2002	**:**	University College London, England with Prof. A. J. Deeming (Chemistry) **Field of Research**: Medicinal Chemistry.

** ***Visiting scientist & postdoctoral research in 2002 was a joint program between Lund and London University and research carried out in two alternative months in each university.***

Scientist December/2003 to May/2005	**:**	Selected and funded by European Union (*INCO-DEV* Project) **Field of Research**: Application of Soluble Silicates in Leather Production in order to reduce contamination in tannery effluents. It was an international joint research program involving countries Australia, Germany, Belgium, England, Italy, India and Bangladesh. **Research Place**: Bangladesh.
Ph. D. 2000	**:**	**Ph. D. Research** works entitled, "Organometallic Compounds of Osmium and Boron" both in Bayreuth University, Germany and Jahangirnagar University funded by **the DAAD Sandwich Ph. D. program** under the joint supervision of Professor Dr. Bernd Wrackmeyer and Professor Dr. Shariff Enamul Kabir and obtained Ph. D. degree from Jahangirnagar University in 2000. The research was done on transition metal complexes with nitrogen, phosphorous and sulphur containing donor ligands, especially to synthesize and characterise of model compounds for Hydrodesulphurization (HDS) & Hydrodenitrogination (HDN) process in respect to industrial and environmental interest.
M. Sc. in Chemistry 1990	**:**	Jahangirnagar University, Savar, Dhaka, Bangladesh. Group: Physical-Inorganic
B. Sc. (Hons) 1989	**:**	Jahangirnagar University, Savar, Dhaka, Bangladesh. Major: Chemistry; Minor- Physics, Maths.
H. S. C., 1986	**:**	Science Group, Dhaka, Board
S. S. C. 1984	**:**	Science Group, Dhaka, Board
Research Interest	**:**	♦ My research interest is directed towards design and development of multi-step reactions in organic synthesis in the respect of pharmaceutical interest. ♦ On clean technology, solid and liquid wastes management and use of wastage for value added production, reduction of pollutants in Textile and Leather industry. Tannery solid waste management and translocation of heavy metals from industrial waste into human body through food chain and their impact. ♦ To synthesize model compounds for Hydrodesulphurization **(HDS)** & Hydrodesnitrogination **(HDN)** process, in addition to their potential as homogeneous and heterogeneous catalysts in regarding industrial and environmental interest. ♦ Synthesis, characterization, reactivity and dynamic behaviour of new organometallic complexes, in particular Os, Ru, Re, Mn and Co complexes containing sulfur, nitrogen and phosphorous donor ligands and details structural studies in the determination of reaction mechanisms and thus provide information to be used in the design of new highly specific catalysts.

Collaboration : With Prof. Dr. Ebbe Nordlander of Lund University, Sweden; Prof. Bernd Wrackmeyer of Bayreuth University, Germany; Prof. Dr. A. J. Deeming of University College London, England; Prof. Dr. Nurul Abser and Prof. Dr. Md. Anamul Haque of Jahangirnagar University.

Techniques & Instrumentation : Skilled on the following techniques: Standard Schlenk apparatus and Glove box techniques for inert atmosphere, column and TLC, different recrystallization techniques, UV-Vis, FT-IR, AAS, GC-MS, HPLC, CD spectrophotometer, SEM, NMR, Particle size analyzer etc.

Students supervision : Supervised a good number (more than 50) of graduate and undergraduate research students in home and in Lund University, Sweden.

Scholarship& Fellowship :

- Japanese Government Scholarship, **2009-2011**.
- Swedish Science Research Council and SIDA, **2008, 2004, 2002.**
- European Union (*INCO-DEV* Project) **Dec. 2003 to May 2005**.
- Royal Society of Chemistry, **2002**.
- DAAD (German Academic Exchange Service), **1998**.
- Ministry of Science and Technology, Bangladesh, **1997**.

Teaching Experience: **31 Years**

Professor :

- January 15, 2019 to till date

Associate Professor :

- (July 19, 2001 to January 14, 2019) Department of Chemistry, Institute of Leather Engineering and Technology (ILET), University of Dhaka, Bangladesh.

Assistant Professor :

- (February 01, 2000 to July 18, 2001) Department of Chemistry, Institute of Leather Engineering and Technology, University of Dhaka.

Lecturer :

- (August 21, 1993 to January 30, 2000) Department of Chemistry, Sorishabari College, Sorishabari, Jamalpur.

Academic & Adm. Experience :

- Member, Courses and Studies Committee, Department of Leather Technology, Footwear Technology and Leather Products Technology, Faculty of Science, University of Dhaka.
- Dead of Chemistry Department from July 2001 to September 2008.
- Academic In-charge of ILET from November 2002 to June 2004 and from April, 2006 to December, 2007.
- Principal In-charge of BCLT, several times.

Conference & Seminar : Participated and presented research papers in many National / International Conferences and Seminars.

Professional Membership :

- Life member, Alumni Association of German Universities in Bangladesh.
- Life member, Bangladesh Chemical Society.
- Life Member, Alumni Association of Jahangirnagar University.
- Life Member, Alumni Association of Chemistry Department of Jahangirnagar University.

Technical manager and Member	**:**	**ISO (17025) Accreditation Committee,** August 2007 to September 2008 Major responsibilities**:** To well organize selected labs for Accreditation, to prepare hand manuals for test and to perform chemical analysis etc.
Co-curriculum Activ.:		♦ Advisor of BADOON (Blood Donor Association), ILET Unit, DU.
Training On (selected)	**:**	♦"Hand Training of Calibration Procedure for the Equipments & apparatus of Testing Laboratories" jointly organized by Electronics Regional Laboratory, India and Leather College in 2008. ♦"Footwear Industry and Making Process" organized by International Trade Centre, UNCTAD, WTO in 2007. ♦"Health, Safety and Environment" organized by University & Industry Alliance, University of Dhaka in 2007. ♦ "Techniques of Productivity Improvement" organized by National Productivity Organization, Ministry of Industries in 2005. ♦ Basic Gas Chromatograph and Gas Chromatograph Mass spectrometer" organized by Varian Inc. India in 2003. ♦ "Curriculum Development in Technical & Vocational Education" organized by Islamic University of Technology in 2001. ♦ "Total Carbon Analyzer" organized by HQ Chowdhury Plasma Plus in 2001. ♦ "Summer Science Course" 1995 organized by Institute for Advancement of Science and Technology Teaching.
List of Publications	**:**	61 peer reviewed research papers published in prestigious National and International Journals (Please see the attached sheet).
Languages	**:**	Fluent in English and Bengali.
Computing	**:**	MS word, MS excel, PowerPoint, Chemdraw, Chemwind etc.

Dr. Md Abdul Mottalib

Name of Referees:

1. Professor Ebbe Nordlander
   Department of Chemistry
   Center for Chemistry and Chemical Engineerin
   Lund University, Box 124, SE-221 00 Lund,
   Sweden. Tel: + 46-46-22 28118
   E-mail: Ebbe.Nordlander@chemphys.lu.se

2. Professor Dr. A. J. Deeming
   Department of Chemistry
   University College London
   20 Gordon Street
   London WC1H 0AJ, England.
   E-mail: a.deeming@btinternet.com

3. Professor Dr. Md. Abdul Hai
   Department of Chemistry
   Jahangirnagar University
   Savar, Dhaka-1342,
   M :01819432145
   e-mail: mahai123@juniv.edu

List of Publications:

1. **M. A. Mottalib**, M. H. Islam, M. C. Dhar, K. Akhtar, M. A. Goni. Preparation and Characterization of New Biodegradable Packaging Materials Based on Gelatin Extracted from Tenualosa ilisha Fish Scales with Cellulose Nanocrystals. *ACS Omega* 2024; **9(52)**: 51175–51190. https://doi.org/10.1021/acsomega.4c07015 **(SCOPUS)**

2. I. J. Bithi, **M. A. Mottalib**, Hijmun-Nahar, M. S. Miran, M. F. Ehsan, M. M. Rahman. Removal of Cr(VI) from wastewater by impregnated activated carbon generated from vegetable tanned leather waste with aluminium oxide. *Results in Surfaces and Interfaces*. 2024; **14:**100197. https://doi.org/10.1016/j.rsurfi.2024.100197 **(SCOPUS)**

3. **M. A. Mottalib,** Z. Adnan, M. C. Dhar, M. Tauhiduzzaman, M. A. A. Shaikh, M. R. Naim, M. A. Goni. Synthesis and characterization of nano-cellulose from Slender amaranth and its application as an eco-friendly reinforcement material in synthetic leather preparation from leather scraps wastes. *Polymer Bulletin*. 2024; **81:** 9363-9388. https://doi.org/10.1007/s00289-024-05260-7 **(SCOPUS)**

4. M. Haque, S. R. Shakil, M. Abdulla-Al-Mamun, P. I. Turzo, **M. A. Mottalib**, M. Hakim, D. Islam. Efficient Cr(III) removal from effluent using functionalized Ficus benghalensis and Bambusa vulgaris bio-adsorbents. Chemical Engineering Science. 2024; **302**:120905. https://doi.org/10.1016/j.ces.2024.120905 **(SCOPUS)**

5. S. Chakma, P. Biswas, M. Abdulla-Al-Mamun, **M. A. Mottalib**, F. Chowdhury, M. A Goni. A New Synthesis Method and Characterization of Graphene Oxide Nanocomposites for the Leather Tanning Process. *Textile & Leather Review*. 2024; **7:**738-769. **https://doi.org/10.31881/TLR.2024.036 (SCOPUS)**

6. N. Jannat, H. Nahar, N. Khan, M. A. Tanmoy, **M. A. Mottalib**, A. Goni, M. Khan,· M. S. Miran. Potential Removal of Chromium from Tannery Wastewater by Water Hyacinth Roots. Water Conservation Science and Engineering. 2023; **8**:34. https://doi.org/10.1007/s41101-023-00203-1 **(SCOPUS)**

7. M. Tauhiduzzaman, **M. A. Mottalib**, M. J. Rahman, M. A. Kalam. Preparation and characterization of composite sheets from solid leather waste with plant fbers: a waste utilization effort. *Clean Technologies and Environmental Policy*. 2023; https://doi.org/10.1007/s10098-023-02642-9 **(SCOPUS)**

8. M. Abdulla-Al-Mamun, M. Marma, M. F. Ali, **M. A. Mottalib**. Design of Apparel Appearance: Recovery and Reuse of Chromium from Tannery Waste Chrome-liquor using Solar Evaporation Process. *Textile & Leather Review*. 2023; **6:**652-666. https://doi.org/10.31881/TLR.2023.100 **(SCOPUS)**

9. **M. A. Mottalib**, M. Chandra, U. H. B. Naher, M. A. Goni. Recovery and Reuse of Chromium from Tan Yard Solid Waste in Leather Manufacturing. *Textile & Leather Review*. 2023; **6**:622-651. https://doi.org/10.31881/TLR.2023.116 **(SCOPUS)**

10. S. Ferdous, **M. A. Mottalib**, M. A. Goni, M. A. Mamun, M. A. A. Sheikh. Reduction of water consumption in leather processing and an investigation of the leather quality. Textile & Leather Review. 2023; **6**:132-150. **https://doi.org/10.31881/TLR.2023.001 (SCOPUS)**

11. R. Akter, K. M. Anis-Ul-Haque, **M. A. Mottalib**, D. Kumar, M. T. R. Joy, S. Rana, M. A. Hoque, T. M. Almutairi, A. A. A. Mohammed, A. Iqbal. Influences of short-chain alcohols, urea and temperature on aggregation behaviour of tetradecyltrimethylammonium bromide and antidiabetic drug mixture.

Molecular Physics. 2023, 121(1). https://doi.org/10.1080/00268976.2022.2148584 **(SCOPUS)**

12. M. M. H. Biswas, **M. A. Mottalib**, M. Nurnabi and M. S. Islam. Production of biofuel by co-pyrolysis of leather dust with plastic waste: characterization and comparison among different feed compositions. *J. Bang. Chem. Soc.* 2022; **34(1)**, 109-118.

13. B. Saha, **M. A. Mottalib**, A. N. M Al- Razee. Heavy metals accumulation in different cultivated fish tissues through commercial fish feeds and health risk estimation in consumers in Bangladesh. *Chem Rev Lett.* 2021; 4: 10-20.

14. A N M Al-Razee, M. N. Abser, **M. A. Mottalib**, A. Nargis, A. K. Jhumur, M. M. U. Thakur, W. Liu, S. Poddar, M. S. I. Sarker, A. Habib. Assessment of heavy metal contamination in sediments of the Shitalakhya River, Bangladesh. *Pak. J. Anal. Environ. Chem.* 2021; **22(1):**84-99. http://doi.org/10.21743/pjaec/2021.06.10 **(SCOPUS)**

15. B. Saha, **M. A. Mottalib** and A. N. M. Al-razee. Assessment of Essential Metals in Selected Fish Feeds and Cultivated Fish Species in Bangladesh and their Impacts on Human Body. *Acta Scientific Agriculture*, 2020; **4(11)**: 30-35. DOI: 10.31080/ASAG.2020.04.0911

16. B. Saha, **M. A. Mottalib** and A. N. M. Al-Razee. Assessment of toxic and essential metals in fish feed ingredients available in different areas of Bangladesh. *Environmental Research & Technology,* 2020; **3(4):** 217-224. https://doi.org/10.35208/ert.838481 **(SCOPUS)**

17. M. S. Akter, M. A. Alim, S. B. Islam, B. Saha, **M. A. Mottalib.** Development of conventional ammonia free deliming agents in leather manufacturing in regarding the environmental pollution control. *Nipp. J. Envon. Sci.*, 2020; **1(5):1013**, 1-7. https://doi.org/10.46266/njes.1013

18. G. Zilani, **M. A. Mottalib**, A. N. M. Al-Razee, T. Ahmed, R. Chakraborty. Determination of toxic and essential metals in different organs and species of consumer chickens in Bangladesh. *J. Bang. Chem. Soc*., 2019; **31(2):** 1-10.

19. Assessment of heavy metals in sediments of Shitalakhya River, Bangladesh: A. N. M. Al-Razee1, M. N. Abser, **M. A. Mottalib**, M. S. Rahman and N. Cho; *Analytical Science & Technology,* 2019; **32(5),** 210-216. https://doi.org/10.5806/AST.2019.32.5.210 **(SCOPUS)**

20. N. Jannat, **M. A. Mottalib**, M. N. Alam. Assessment of Physicochemical Properties of Surface Water of Mokeshbeel, Gazipur, Bangladesh. *HSOA Journal of Environmental Science: Current Research,* 2019; **2:** 1-6. DOI: 10.24966/ESCR-5020/100014

21. M. S. Ahmed, M. M. H. Biswas, **M. A. Mottalib**, M. N. Alam, M. Khan. Translocation of heavy metals from industry into vegetables and crops through water and soil of Mokesh Beel in Bangladesh and their impact on human body. *IOSR Journal of Environmental Science, Toxicology and Food Technology,* 2019; **13(5 I)**:59-71. DOI:10.9790/2402-1305015971

22. **M. A. Mottalib**, G. Zilani, T. I. Suman, T. Ahmed, M. S. Islam. Estimation of trace metals in different organs and species of consumer chickens in Bangladesh. *J. Health and Pollution,* 2018; **8(20):** 1-10. https://doi.org/10.5696/2156-9614-8.20.181208 **(SCOPUS)**

23. B. Saha, **M. A. Mottalib**, A. N. M. Al-Razee. Assessment of selected heavy metals concentration in different brands of fish feed available in Bangladesh. *J. Bang. Aca. Sci.*, 2018; **42(2):** 207-210.

24. M. M. H. Biswas, **M. A. Mottalib** and M. N. Alam. Determination of heavy metals in cultivated fresh water fish species and possible human health risk assessment in Bangladesh. *J. Bang. Chem. Soc.*, 2018; **30(1):** 10-16.

25. S. B. Hasan, **M. A. Mottalib,** A. Hore, N. Mohammed, Fatema-tuj-zohra. Removal of chromium from tannery waste liquor by using lime liquor in regarding the reduction of environmental pollution and reuse it in leather production. *IOSR J. Env. Sci, Toxicol. and Food Tech*., 2018; **12(10 I):** 01-06. DOI: 10.9790/2402-1210010106

26. A. N. M. Al-Razee, M. N. Abser, **M. A. Mottalib** and M. S. Rahman. Assessment of physicochemical parameters of the surface water of Shitalakhya river polluted by paper mills effluent. *J. Bang. Chem. Soc.*, 2017; **29(2):** 1-11.

27. **M. A. Mottalib**, S. Roy, M. S. Ahmed, M. Khan and A. N. M. Al-Razee. Comparative study of water quality of Buriganga and Balu river, Dhaka, Bangladesh. *Int. J. Curr. Res*., 2017; **9(10):** 59132-59137.

28. **M. A. Mottalib**, A. Sultana, M. M. Rahman, G. Zilani, S. Chowdhury and S. Hoque; Investigation onto Soil Salinity of Hazaribagh Tanning Industrial Area, Dhaka, Bangladesh: *IOSR J. Env. Sci, Toxicol. and Food Tech*., 2017; **11(8)**: 44-49. DOI: 10.9790/2402-1108024449

29. **M. A. Mottalib**, M. M. Alam, A. Afrose and A. N. M. Al-Razee. Reduction of pollutants of tannery wastewater by using acidic waste liquor. *IOSR J. Env. Sci, Toxicol. and Food Tech*., 2017; **11(3):** 28-33. DOI: 10.9790/2402-1103012833

30. A. N. M. Al-razee, M. N. Abser, **M. A. Mottalib** and M. Z. H. Ansary. Assessment of lead in water, sediments, soils and vegetables grown on the bank of Shitalakhya river: Bangladesh; *J. Bang. Aca. Sci.*, 2016; **40(2):** 91-99.

31. **M. A. Mottalib**, S. H. Somoal, M. A. A. Shaikh and M. S. Islam; Heavy metal concentrations in contaminated soil and vegetables of tannery area in Dhaka, Bangladesh. *Int. J. Curr. Res*., 2016; **8(5):** 30369-373.

32. **M. A. Mottalib,** A. N. M. Al-Razee, M. N. Abser and E.U. M. Aman. Assessment of Physico-Chemical Properties of Surface Water in Shitalakhya River, Polash, Narsingdi, Bangladesh. *Int. J. Adv. Res*., 2016; **4(8)**: 915-924. https://dx.doi.org/10.21474/IJAR01/1288

33. **M. A. Mottalib**, M. Haukka and E. Nordlander. Chiral diphosphine derivatives of alkylidyne tricobalt clusters-A comparative study of different cobalt carbonyl catalysts for (asymmetric) intermolecular Pauson-Khand reaction. *Polyhedron*, 2016; **103 (Part B)**: 275-282. https://doi.org/10.1016/j.poly.2015.04.021 **(SCOPUS)**

34. **M. A. Mottalib,** A. Sultana, S. H. Somoal and M. N. Abser. Assessment of heavy metals in tannery waste-contaminated poultry feed and their accumulation in different edible parts of chicken; *IOSR J. Env. Sci, Tox. and Food Tech*., 2016; **10(11):** 72-78. DOI:10.9790/2402-1011017278

35. **M. A. Mottalib**, S. H. Somoal, M. S. Islam, M. N. Alam and M. N. Abser. Removal of chromium from tannery wastewater by tannery lime liquor; A very cost effective method. *Int. J. Curr. Res*., 2015; **7(6)**:16795-98.

36. **M. A. Mottalib**, T. K. Mim and M. N. Abser. A simple effective treatment of tannery effluents. *J. Bang. Aca. Sci*., 2014; **38(2):** 235-239.

37. M. A. Goni, J. U. Ahmed, M. A. Halim, **M. A. Mottalib** and D. A. Chowdhury. Uptake and translocation of metals in different parts of crop plants irrigated with contaminated water from DEPZ area of Bangladesh. *Bull Environ Contam Toxicol*, 2014; **92**: 726-732. **(SCOPUS)** DOI: 10.1007/s00128-014-1264-z

38. M. N. Uddin, **M. A. Mottalib**, N. Begum, S. Ghosh, A. K. Raha, D. T. Haworth, S. V. Lindeman, T. A. Siddiquee, D. W. Bennett, G. Hogarth, E. Nordlander and S. E. Kabir. Carbon-phosphorus and carbon-hydrogen bond activation of tri(2-thienyl)phosphine at dirhenium and dimanganese centers. *Organometallics*, 2009; **28:** 1514-1523. https://epublications.marquette.edu/chem_fac/611 **(SCOPUS)**

39. V. Moberg, **M. A. Mottalib**, D. Sauer, Y. Poplavskaya, D. C. Craig, S. B. Colbran, A. J. Deeming and E. Nordlander. Chiral and achiral phosphine derivatives of alkylidyne tricobalt carbonyl clusters as catalyst precursors for (asymmetric) inter- and intramolecular Pauson-Khand reactions. *Dalton Trans.*, 2008; 2442-2453. https://doi.org/10.1039/B717698H **(SCOPUS)**

40. **M. A. Mottalib**, S. E. Kabir, A. J. Deeming and E. Nordlander. Two modes of C-H bond activation of tris(2-thienyl)phosphine in trinuclear osmium carbonyl clusters. *J. Organomet. Chem.*, 2007; **692:** 5007-5017. DOI:10.1016/j.jorganchem.2007.07.042 **(SCOPUS)**

41. H. A. Shimul, M. Y. A. Mollah and **M. A. Mottalib**. Electrogeneration of Al-oxyhydroxide and its characterization: *J. Bang. Aca. Sci*., 2007; **31(1):** 143-149.

42. N. K. K. Kazemifar, M. J. Stchedroff, **M. A. Mottalib,** Simona Selva, M. Monari, and E. Nordlander. Syntheses and Fluxional processes of Diphenyl(2- thienyl)phosphane Derivatives of Triosmium Clusters. *Eur. J. Inorg. Chem*., 2006, 2058-2068. DOI:10.1002/ejic.200501141 **(SCOPUS)**

43. S. E. Kabir, **M. A. Mottalib**, G. M. G. Hossain, E. Nordlander and E. Rosenberg. Reactions of $[(\mu\text{-H})Os_3(CO)_{10}(\mu\text{-OMe})]$ and $[(\mu\text{-H})Os_3(CO)_9(\mu\text{-OMe})(MeCN)]$ with dppm, dppe, dppp, and PPh_2H: X-ray Crystal Structures of $[(\mu\text{-H})Os_3(CO)_8(\mu\text{-OMe})(\mu_2\text{-}\eta^2\text{-dppm})]$ and $[(\mu\text{-H})Os_3(CO)_9(\mu\text{-OMe})(PPh_2H)]$. *Polyhedron*, 2006; **25 (1):** 95-104. https://doi.org/10.1016/j.poly.2005.07.004 **(SCOPUS)**

44. **M. A. Mottalib**, N. Begum, S. M. T Abedin, T. Akter, S. E. Kabir, M. A. Miah, D. Rokhsana, E. Rosenberg, G. M. Hossain and K. I. Hardcastle. Reactions of Electron-Deficient Triosmium Clusters with diazomethane: Electrochemical Properties and Computational Studies of Charge Distribution**.** *Organometallics*, 2005; **24(20):** 4747-4759. DOI:10.1021/om0503794. **(SCOPUS)**

45. **M. A. Mottalib**, N. Begum, S. E. Kabir and G. M. G. Hossain. Reaction $[Os_3(\mu\text{-H})(\mu\text{-OH})(CO)_{10}]$ with PPh_2H : X-ray crystal structure of $[Os_3(\mu\text{-H})_2(CO)_8(\mu\text{-}PPh_2)_2]$. *J. Bang. Aca. Sci*., 2005; **29(2):** 135-143.

46. S. E. Kabir, **M. A. Mottalib** and K. M. A. Malik. X-ray crystal structure of $[(\mu\text{-H})_2Os_3(CO)_8(\mu\text{-dppm})]$. *J. Bang. Aca. Sci.*, 2004; **28(1):** 51-55.

47. B. Wrackmeyer, H. E. Maisel, E. Molla, **M. A. Mottalib** A. Badshah, M. H. Bhatti and S. Ali. Combination of 1,2-hydroboration and 1,1-organoboration: synthesis of novel organo-substituted 1-silacyclobutenes. *Appl. Organomet. Chem.*, 2003; **17:** 465-472. https://doi.org/10.1002/aoc.460. **(SCOPUS)**

48. M. I. Hyder, S. E. Kabir, M. A. Miah**, M. A. Mottalib** and K. M. A. Malik. Synthesis and X-ray crystal structure of $[(\mu\text{-H})_2(Cl)Os_3(CO)_9\{\mu_3\text{-}\eta^2\text{-}C(C_9H_5)(4\text{-}CH_3)N\}]$. *J. Bang. Aca. Sci.*, 2003; **27(2):** 175-185.

49. S. E. Kabir, K. M. A. Malik, H. S. Mandal, **M. A. Mottalib** and E. Rosenberg. Reaction of $[Os_3(CO)_9\{\mu_3\text{-}\eta^2\text{-}C_7H_3(2\text{-}CH_3)NS\}(\mu\text{-H})]$ with diazomethane. The first example of a trimetallic cluster containing a μ-methylidene and a methyl; *Organometallics*, 2002; **21:** 2593-2595. https://doi.org/10.1021/om020174k. **(SCOPUS)**

50. K. A. Azam, G. M. G. Hossain, S. E. Kabir, K. M. A. Malik**, M. A. Mottalib,** Salina Perven and N. C. Sarker. Sulfido triosmium clusters containing bridging dppm ligand: crystal structures of $[Os_3(CO)_7(\mu_3\text{-CO})\ (\mu_3\text{-S})\ (\mu\text{-dppm})]$ and two isomers of $[Os_3(CO)_7(\mu_3\text{-S})_2(\mu\text{-dppm})]$. *Polyhedron*, 2002; **21:** 381-387. https://doi.org/10.1016/S0277-5387(01)00999-8. **(SCOPUS)**

51. S. M. T Abedin, K. A. Azam, M. B. Hursthouse, S. E. Kabir, K. M. A. Malik, **M. A. Mottalib** and E. Rosenberg. Reactivity of the unsaturated triosmium cluster $[(\mu\text{-H})Os_3(CO)_8\{Ph_2PCH_2P(Ph)C_6H_4\}]$ with thiols. *J. Cluster Sci*., 2001; **12(1):** 5-22. **(SCOPUS)**

52. S. E. Kabir, C. A. Johns, K. M. A. Malik, **M. A. Mottalib** and E. Rosenberg. Reactivity of the unsaturated triosmium cluster $[(\mu\text{-H})Os_3(CO)_8Ph_2PCH_2P(Ph)C_6H_4\}]$ with dithiols: X-ray structures of $[Os_3(CO)_8(\mu\text{-}SCH_2CH_2CH_2S)(Ph_2PCH_2PPh_2)].1/2CH_2Cl_2$ and $[(\mu\text{-H})Os_3(CO)_7(\mu_3\text{-}\eta^3$

$SCH_2CH_2CHS)(Ph_2PCH_2PPh_2)].1/2H_2O$. *J. Organomet. Chem.*, 2001; **625(1):** 112-120. https://doi.org/10.1016/S0022-328X(00)00901-3 **(SCOPUS)**

53. B. Wrackmeyer, H. E. Maisel, W. Milius, A. Badshah, E. Molla and **M. A. Mottalib.** New zwitterionic heterocycyles derived from 1-chloro(dimethyl)silyl-1-borylalkenes and 2-lithio-1-methylimidazol and 1- lithio-indazole. *J. Organomet. Chem.*, 2000; **602**: 45-50. https://doi.org/10.1016/S0022-328X(00)00116-9 **(SCOPUS)**

54. S. E. Kabir, K. M. A. Malik, E. Molla and **M. A. Mottalib.** Reactivity of $[(\mu\text{-H})Os_3(CO)_8\{Ph_2PCH_2P(Ph)C_6H_4\}]$ with organic heterothiols: X-ray structures of $[H(\mu\text{-H})Os_3(CO)_8(\eta^2\text{-pyS})\{Ph_2PCH_2P(Ph)C_6H_4\}]$ and $[Os_3(CO)_8(\mu\text{-}\eta^2\text{-pyS})\{Ph_2PCH_2P(Ph)C_6H_4\}]$. *J. Organomet. Chem.*, 2000; **616**: 157-164. **(SCOPUS)**

55. K. M. Hanif, S. E. Kabir, **M. A. Mottalib,** M. B. Hursthouse, K. M. A. Malik, and E. Rosenberg. Dithiolate complexes of ruthenium and osmium: X-ray structures of $[Ru_2(CO)_6(\mu\text{-}SCH_2CH_2S)]$ and $[\{(\mu\text{-H})M_3(CO)_{10}\}_2(\mu\text{-}SCH_2CH_2CH_2S)]$ (M=Ru, Os). *Polyhedron*, 2000; **19:** 1073-1080. **(SCOPUS)**

56. K. A. Azam, R. Dilshad, S. E. Kabir, **M. A. Mottalib,** M. B. Hursthouse and K. M. A. Malik. Metallation of 2-methyl-2-thiazoline at a triosmium cluster: X-ray structure of $[(\mu\text{-H})Os_3(CO)_{10}(\mu\text{-}\eta^2\text{-}CH_2C{=}NCH_2CH_2S)]$. *Polyhedron*, 2000; **19:** 1081-1084. **(SCOPUS)**

57. J. Akter, K. A. Azam, S. E. Kabir, K. M. A. Malik and **M. A. Mottalib.** Novel triosmium clusters derived from the reaction of $[Os_3(CO)_{10}(\mu\text{-}Ph_2PCH_2PPh_2)]$ with 1-vinylimidazole. *Inorg. Chem. Commum.*, 2000; **3**: 553-556. **(SCOPUS)**

58. S. M. T Abedin, K. I. Hardcastle, S. E. Kabir, K. M. A. Malik, **M. A. Mottalib,** E. Rosenberg and M. J. Abedin. Carboxylation of a μ_3-diazo methylidyne triosmium cluster. *Organometallics*, 2000**; 19:** 5623-5627. **(SCOPUS)**

59. S. E. Kabir and **M. A. Mottalib.** Aspects of triosmium clusters. *Chemical Review*, Jahangirnagar University, Bangladesh, 2000, 25-45.

60. B. Wrackmeyer, A. Badshah, E. Molla and **M. A. Mottalib.** Hydroboration of 1-alkynyl(chloro)silanes-new synthons in heterocyclic chemistry. *J. Organomet. Chem.*, 1999; **584:** 98-102. **(SCOPUS)**

61. K. A. Azam, M. B. Hursthouse, S. E. Kabir, K. M. A. Malik and **M. A. Mottalib.** X-ray structure of $[Os_3(CO)_{10}(\mu\text{-}Ph_2PCH_2PPh_2)]$. *J. Chem. Crystallogra*. 1999; **29**: 813-818. **(SCOPUS)**

Recent oral presentation on Tannery Waste management

1. Extraction of Chromium from CETP Sludge and Reuse It in Leather Manufacturing: A Holistic Approach of Clean Technology: M. A. Mottalib; At the Institute of Leather Engineering and Technology, University of Dhaka. Date 21.03.2023

2. Recovery of Chromium from Tannery Wastewater by Lime Liquor and Reuse It in Leather Manufacturing: A Holistic Approach of Clean Technology. M. A. Mottalib; International Chemical Congress 2022, BCSIR.

3. Impact of Tannery Wastes on Aquatic Lives of Dhaleshwari River: M. A. Mottalib. International Conference on Environmental Protection for Sustainable Development (ICEPSD-2022)" at the University of Dhaka.