

CURRICULUM VITAE

Dr. Md. Abdul Mottalib, Principal, NITER

Professor, Institute of Leather Engineering and Technology, University of Dhaka



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

Published 48 Research articles in peer-reviewed journals, reads 9715 and over 433
citations RG-22.54 (h index-13, i index-13),

Celll: +880 1757306511, Email: abdul.mottalib@du.ac.bd; dr.mottalib@gmail.com

POSITION HELD (Administrative and Academic); Total Professional Experiences: 27 Years

Period(s)

1/2019 ~	Professor , Institute of Leather Engineering and Technology, University of Dhaka Web: https://www.du.ac.bd/faculty/faculty_details/ILET/2297
1/2014 ~	Warden , Dr. Quadrat-E-Khuda Hostel, University of Dhaka
2/2018 ~	Member , Board of Governors of Institute of Leather Engineering and Technology, University of Dhaka, member elected twice by the faculty members of the Institute
11/2002-12/2007	Academic-in-charge of The Institute (formerly Bangladesh College of Leather Technology, BCLT)
1/2013 ~	Member , Courses and Studies Committee of ILET, University of Dhaka
2000-2008	Member , Courses and Studies Committee of BCLT, University of Dhaka
2001-2008	Head of Chemistry Department, BCLT, University of Dhaka
8/2007-9/2009	Technical Manager: ISO (17025) Accreditation Committee of BCLT Major responsibilities: To well organize selected labs for Accreditation, to Prepare hand manuals for test and to perform chemical analysis, preserve record
Several times	Director-in-charge of ILET and Principal-in-charge of BCLT, University of Dhaka

PERSONAL INFORMATION

Date of Birth: March 2, 1969	Permanent Address	Current Address
Father's name: Late Abdur Rahim	Vill. Chhoyani Bokoshiya	Belly – 06, Teacher's Quarter
Mother's name: Late Amena Begum	P.O. Athailshimul	Leather Institute, University of Dhaka
Spouse: Suraya Khatoon	P.S. Ghatail, Dist. Tangail	44-50 Hazaribagh, Dhaka-1209

EDUCATION AND RESEARCH (Period and Position)	
10/2009 - 6/2011	Postdoctoral research: 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
10/2008 - 9/2009	Postdoctoral Research Associate: Lund University, Sweden with Prof. Ebbe Norlander. Field of research: Synthesis and characterization of chiral and prochiral phosphine based Co, Rh, Ru complexes and to investigate their catalytic behaviour in Asymmetric catalysis especially in respect of chiral molecule synthesis.
6/2004 - 8/2004	Visiting Scientist: Lund University, Sweden with Prof. Ebbe Norlander. Field of research: Asymmetric catalysis for chiral drug synthesis.
1/2002 – 8/2002	Postdoctoral Research: Lund University, Sweden with Prof. Ebbe Norlander. Field of research: Medicinal Chemistry, multi steps organic synthesis
1/2002 – 8/2002	Visiting Scientist: University College London, England with Prof. A. J. Deeming, Field of Research: Medicinal Chemistry.
** <u>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.</u>	
12/2003 – 5/2005	Scientist: Selected and funded by European Union (<i>INCO-DEV</i> 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.
6/1998 – 12/1998	Ph. D. Research was carried out in Inorganic Chemistry at Bayreuth University, Germany with Prof. Bernd Wrackmeyer under DAAD scholarship.
7/1996 – 1/2000	Thesis Title “ <u>Organometallic Compounds of Osmium and Boron</u> ”, research was done on transition metal complexes with nitrogen, phosphorous and sulphur containing donor ligands, specially to synthesize and characterise of model compounds for Hydrodesulphurization (HDS) & Hydrodenitrogenation (HDN) process in respect to industrial and environmental interest. Supervisor: Prof. Shariff Enamul Kabir, Jahangirnagar University
** (The Ph.D research was carried out as a Sandwich program between Jahangirnagar & Bayreuth University, Germany)	
1990	M. Sc. in Inorganic Chemistry , Jahangirnagar University, Savar, Dhaka
1989	B. Sc. Hons (Chemistry) , Minor- Physics and Mathematics, Jahangirnagar University, Savar, Dhaka
1986	H. S. C., Science Group , Bhuiyapur Pilot High School, Tangail
1984	S. S. C., Science Group , Ibrahim Kha College, Bhuiyapur, Tangail

SCHOLARSHIP & FELLOWSHIP

2009-2011.	◆ Japanese Government Scholarship,
2008	◆ Crafoord Foundation, Sweden
2004, 2002.	◆ Swedish Science Research Council and SIDA
2003 – 2005	◆ European Union (<i>INCO-DEV</i> Project)
2002	◆ Royal Society of Chemistry
1998	◆ DAAD (German Academic Exchange Service)
1997	◆ Ministry of Science and Technology, Bangladesh

Supervisors	: (1) Prof. Bernd Wrackmeyer, Department of Chemistry, Bayreuth University, D-95440 Bayreuth, Germany and (2) Prof. Shariff Enamul Kabir, Department of Chemistry, Jahangirnagar University, Dhaka, Bangladesh.
<u>Research Interest</u>	: ◆ On cleaning technology, solid and liquid wastes management and use of wastage for value added production, reduction of pollutants in tanning industry. ◆ My research interest is directed towards design and development of multi-step reactions in organic synthesis in the respect of pharmaceutical interest. ◆ 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. Ebbe Nordlander of Lund University, Sweden; Prof. Bernd Wrackmeyer of Bayreuth University, Germany; Prof. A. J. Deeming of University College London, England; Prof. Shariff Enamul Kabir and Prof. Md. Nurul Abser 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, ASS, GC/Mass, HPLC, CD spectrophotometer, SEM, NMR etc.

Students supervision:	Supervised graduate and undergraduate research students in home and in Lund University, Sweden.
<u>Teaching Experience:</u>	28 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, 2000 to 18 th July, 2001) Department of Chemistry, Institute of Leather Engineering and Technology, University of Dhaka.
Lecturer :	◆ (August, 1993 to January, 2000) Department of Chemistry, Sorishabari College, Sorishabari, Jamalpur.
<u>Academic & Adm. Experience</u>	<p>◆ Member, Courses and Studies Committee, Department of Leather Technology, Footwear Technology and Leather Products Technology, Faculty of Science, University of Dhaka.</p> <p>◆ Head of Chemistry Department from July 2001 to September 2008.</p> <p>◆ Academic In-charge of ILET from November 2002 to June 2004 and from April, 2006 to December, 2007.</p> <p>◆ Principal In-charge of BCLT, several times.</p>
Conference & Seminar :	Participated and presented research papers in many National / International Conferences and Seminars.
Professional Membership :	<p>◆ Life member, Alumni Association of German Universities in Bangladesh.</p> <p>◆ Life member, Bangladesh Chemical Society.</p> <p>◆ Life Member, Alumni Association of Jahangirnagar University.</p> <p>◆ Life Member, Alumni Association of Chemistry Department of Jahangirnagar University.</p>
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.:	<p>◆ Advisor of BADOON (Blood Donor Association), ILET Unit, DU.</p> <p>◆ Advisor of Prothom-Alo Bondhu Sova, ILET Unit, DU.</p>
Training On (selected)	<p>◆ “Hand Training of Calibration Procedure for the Equipments & apparatus of Testing Laboratories” jointly organized by Electronics Regional Laboratory, India and Leather College in 2008.</p> <p>◆ “Footwear Industry and Making Process” organized by International Trade Centre, UNCTAD, WTO in 2007.</p>

<p>List of Publications :</p>	<p>◆ “Health, Safety and Environment” organized by University & Industry Alliance, University of Dhaka in 2007.</p> <p>◆ “Techniques of Productivity Improvement” organized by National Productivity Organization, Ministry of Industries in 2005.</p> <p>◆ Basic Gas Chromatograph and Gas Chromatograph Mass spectrometer” organized by Varian Inc. India in 2003.</p> <p>◆ “Curriculum Development in Technical & Vocational Education” organized by Islamic University of Technology in 2001.</p> <p>◆ “Total Carbon Analyzer” organized by HQ Chowdhury Plasma Plus in 2001.</p> <p>◆ “Summer Science Course” 1995 organized by Institute for Advancement of Science and Technology Teaching.</p> <p>48 peer reviewed research papers published in prestigious National and International Journals (Please see the attached sheet).</p>
<p>Languages</p>	<p>Fluent in English and Bengali.</p>
<p>Computing</p>	<p>MS word, MS excel, PowerPoint, Chemdraw, Chemwind etc.</p>

List of Publications:

1. Assessment of Heavy Metal Contamination in Sediments of the Shitalakhya River, Bangladesh : 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 and A. Habib; *Pak. J. Anal. Environ. Chem.* 2021, **22**, (1), 84-99.
2. Assessment of Essential Metals in Selected Fish Feeds and Cultivated Fish Species in Bangladesh and their Impacts on Human Body: B. Saha, **M. A. Mottalib** and A. N. M. Al-razee; *Acta Scientific Agriculture*, 2020, **4(11)**, 30-35.
3. Assessment of toxic and essential metals in fish feed ingredients available in different areas of Bangladesh: B. Saha, **M. A. Mottalib** and A. N. M. Al-Razee; *Environmental Research & Technology*, 2020, **3(4)**, 217-224.
4. Development of conventional ammonia free deliming agents in leather manufacturing in regarding the environmental pollution control: M. S. Akter, M. A. Alim, S. B. Islam, B. Saha and **M. A. Mottalib**; *Nipp. J. Environ. Sci.*, 2020, **1(5):1013**, 1-7.
5. Determination of toxic and essential metals in different organs and species of consumer chickens in Bangladesh: G. Zilani, **M. A. Mottalib**, A. N. M. Al-Razee, T. Ahmed and R. Chakraborty; *J. Bang. Chem. Soc.*, 2019, **31(2)**, 1-10.
6. 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.

7. Assessment of Physicochemical Properties of Surface Water of Mokeshbeel, Gazipur, Bangladesh: N. Jannat, **M. A. Mottalib** and M. N. Alam; *HSOA Journal of Environmental Science: Current Research*, 2019, **2**, 1-6.
8. 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: M. S. Ahmed, M. M. H. Biswas, **M. A. Mottalib**, M. N. Alam and M. Khan; *IOSR Journal of Environmental Science, Toxicology and Food Technology*, 2019, **13(5, I)**, 59-71.
9. Estimation of trace metals in different organs and species of consumer chickens in Bangladesh: **M. A. Mottalib**, G. Zilani, T. I. Suman, T. Ahmed and M. S. Islam; *J. Health and Pollution*, 2018, **8(20)**, 1-10.
10. Assessment of selected heavy metals concentration in different brands of fish feed available in Bangladesh. B. Saha, **M. A. Mottalib** and A. N. M. Al-Razee; *J. Bang. Aca. Sci.*, 2018, **42(2)**, 207-210.
11. Determination of heavy metals in cultivated fresh water fish species and possible human health risk assessment in Bangladesh: M. M. H. Biswas, **M. A. Mottalib** and M. N. Alam; *J. Bang. Chem. Soc.*, 2018, **30(1)**, 10-16.
12. Removal of chromium from tannery waste liquor by using lime liquor in regarding the reduction of environmental pollution and reuse it in leather production: S. B. Hasan, **M. A. Mottalib**, A. Hore, N. Mohammed and Fatema-tuj-zohra; *IOSR J. Env. Sci, Toxicol. and Food Tech.*, 2018, **12(10, I)**, 01-06.
13. Assessment of physicochemical parameters of the surface water of Shitalakhya river polluted by paper mills effluent: A. N. M. Al-Razee, M. N. Abser, **M. A. Mottalib** and M. S. Rahman; *J. Bang. Chem. Soc.*, 2017, **29(2)**, 1-11.
14. Comparative study of water quality of Buriganga and Balu river, Dhaka, Bangladesh: **M. A. Mottalib**, S. Roy, M. S. Ahmed, M. Khan and A. N. M. Al-Razee; *Int. J. Curr. Res.*, 2017, **9(10)**, 59132-59137.
15. Investigation onto Soil Salinity of Hazaribagh Tanning Industrial Area, Dhaka, Bangladesh: **M. A. Mottalib**, A. Sultana, M. M. Rahman, G. Zilani, S. Chowdhury and S. Hoque; *IOSR J. Env. Sci, Toxicol. and Food Tech.*, 2017, **11(8)**, 44-49.
16. Reduction of pollutants of tannery wastewater by using acidic waste liquor: **M. A. Mottalib**, M. M. Alam, A. Afrose and A. N. M. Al-Razee; *IOSR J. Env. Sci, Toxicol. and Food Tech.*, 2017, **11(3)**, 28-33.
17. Assessment of lead in water, sediments, soils and vegetables grown on the bank of Shitalakhya river: Bangladesh, A. N. M. Al-razee, M. N. Abser, **M. A. Mottalib** and M. Z. H. Ansary; *J. Bang. Aca. Sci.*, 2016, **40(2)**, 91-99.
18. Heavy metal concentrations in contaminated soil and vegetables of tannery area in Dhaka, Bangladesh: **M. A. Mottalib**, S. H. Somoal, M. A. A. Shaikh and M. S. Islam; *Int. J. Curr. Res.*, 2016, **8(5)**, 30369-373.
19. Assessment of Physico-Chemical Properties of Surface Water in Shitalakhya River, Polash, Narsingdi, Bangladesh: **M. A. Mottalib**, A. N. M. Al-Razee, M. N. Abser and E.U. M. Aman; *Int. J. Adv. Res.*, 2016, **4(8)**, 915-924.
20. Chiral diphosphine derivatives of alkylidyne tricobalt clusters-A comparative study of different cobalt carbonyl catalysts for (asymmetric) intermolecular Pauson-Khand reaction: **M. A. Mottalib**, M. Haukka and E. Nordlander; *Polyhedron*, 2016, **103 (Part B)**, 275-282.

21. Assessment of heavy metals in tannery waste-contaminated poultry feed and their accumulation in different edible parts of chicken: **M. A. Mottalib**, A. Sultana, S. H. Somoal and M. N. Abser; *IOSR J. Env. Sci, Tox. and Food Tech.*, 2016, **10(11)**, 72-78.
22. Removal of chromium from tannery wastewater by tannery lime liquor; A very cost effective method: **M. A. Mottalib**, S. H. Somoal, M. S. Islam, M. N. Alam and M. N. Abser ; *Int. J. Curr. Res.*, 2015, **7(6)**, 16795-98.
23. A simple effective treatment of tannery effluents: **M. A. Mottalib**, T. K. Mim and M. N. Abser; *J. Bang. Aca. Sci.*, 2014, **38(2)**, 235-239.
24. Uptake and translocation of metals in different parts of crop plants irrigated with contaminated water from DEPZ area of Bangladesh: M. A. Goni, J. U. Ahmed, M. A. Halim, **M. A. Mottalib** and D. A. Chowdhury; *Bull Environ Contam Toxicol*, 2014, **92**, 726-732.
25. Carbon-phosphorus and carbon-hydrogen bond activation of tri(2-thienyl)phosphine at dirhenium and dimanganese centers : 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 ; *Organometallics*, 2009, **28**, 1514-1523 .
26. Chiral and achiral phosphine derivatives of alkylidyne tricobalt carbonyl clusters as catalyst precursors for (asymmetric) inter- and intramolecular Pauson-Khand reactions: V. Moberg, **M. A. Mottalib**, D. Sauer, Y. Poplavskaya, D. C. Craig, S. B. Colbran, A. J. Deeming and E. Nordlander; *Dalton Trans.*, 2008, 2442-2453.
27. Two modes of C-H bond activation of tris(2-thienyl)phosphine in trinuclear osmium carbonyl clusters: **M. A. Mottalib**, S. E. Kabir, A. J. Deeming and E. Nordlander ; *J. Organomet. Chem.*, 2007, **692**, 5007-5017.
28. Electrogeneration of Al-oxyhydroxide and its characterization: H. A. Shimul, M. Y. A. Mollah and **M. A. Mottalib**; *J. Bang. Aca. Sci.*, 2007, **31(1)**, 143-149.
29. Syntheses and Fluxional processes of Diphenyl(2- thienyl)phosphane Derivatives of Triosmium Clusters : N. K. K. Kazemifar, M. J. Stchedroff, **M. A. Mottalib**, Simona Selva, M. Monari, and E. Nordlander; *Eur. J. Inorg. Chem.*, 2006, 2058-2068.
30. Reactions of $[(\mu\text{-H})\text{Os}_3(\text{CO})_{10}(\mu\text{-OMe})]$ and $[(\mu\text{-H})\text{Os}_3(\text{CO})_9(\mu\text{-OMe})(\text{MeCN})]$ with dppm, dppe, dppp, and PPh_2H : X-ray Crystal Structures of $[(\mu\text{-H})\text{Os}_3(\text{CO})_8(\mu\text{-OMe})(\mu_2\text{-}\eta^2\text{-dppm})]$ and $[(\mu\text{-H})\text{Os}_3(\text{CO})_9(\mu\text{-OMe})(\text{PPh}_2\text{H})]$: S. E. Kabir, **M. A. Mottalib**, G. M. G. Hossain, E. Nordlander and E. Rosenberg; *Polyhedron* , 2006, **25**, 95-104.
31. Reactions of Electron-Deficient Triosmium Clusters with diazomethane: Electrochemical Properties and Computational Studies of Charge Distribution: **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; *Organometallics*, 2005, **24(20)**, 4747-4759.
32. Reaction $[\text{Os}_3(\mu\text{-H})(\mu\text{-OH})(\text{CO})_{10}]$ with PPh_2H : X-ray crystal structure of $[\text{Os}_3(\mu\text{-H})_2(\text{CO})_8(\mu\text{-PPh}_2)_2]$. : **M. A. Mottalib**, N. Begum, S. E. Kabir and G. M. G. Hossain; *J. Bang. Aca. Sci.*, 2005, **29(2)**, 135-143.
33. X-ray crystal structure of $[(\mu\text{-H})_2\text{Os}_3(\text{CO})_8(\mu\text{-dppm})]$: S. E. Kabir, **M. A. Mottalib** and K. M. A. Malik; *J. Bang. Aca. Sci.*, 2004, **28(1)**, 51-55.
34. Combination of 1,2-hydroboration and 1,1-organoboration: synthesis of novel organo-substituted 1-silacyclobutenes : B. Wrackmeyer, H. E. Maisel, E. Molla, **M. A. Mottalib** A. Badshah, M. H. Bhatti and S. Ali; *Appl. Organomet. Chem.*, 2003, **17**, 465-472.

35. Synthesis and X-ray crystal structure of $[(\mu\text{-H})_2(\text{Cl})\text{Os}_3(\text{CO})_9\{\mu_3\text{-}\eta^2\text{-C}(\text{C}_6\text{H}_5)(4\text{-CH}_3)\text{N}\}]$: M. I. Hyder, S. E. Kabir, M. A. Miah, **M. A. Mottalib** and K. M. A. Malik; *J. Bang. Aca. Sci.*, 2003, **27(2)**, 175-185.
36. Reaction of $[\text{Os}_3(\text{CO})_9\{\mu_3\text{-}\eta^2\text{-C}_7\text{H}_3(2\text{-CH}_3)\text{NS}\}(\mu\text{-H})]$ with diazomethane. The first example of a trimetallic cluster containing a μ -methylidene and a methyl : S. E. Kabir, K. M. A. Malik, H. S. Mandal, **M. A. Mottalib** and E. Rosenberg ; *Organometallics*, 2002, **21**, 2593-2595.
37. Sulfido triosmium clusters containing bridging dppm ligand: crystal structures of $[\text{Os}_3(\text{CO})_7(\mu_3\text{-CO})(\mu_3\text{-S})(\mu\text{-dppm})]$ and two isomers of $[\text{Os}_3(\text{CO})_7(\mu_3\text{-S})_2(\mu\text{-dppm})]$: K. A. Azam, S. E. Kabir, **M. A. Mottalib**, N. C. Sarker and K. M. A. Malik; *Polyhedron*, 2002, **21**, 381-387.
38. Reactivity of the unsaturated triosmium cluster $[(\mu\text{-H})\text{Os}_3(\text{CO})_8\{\text{Ph}_2\text{PCH}_2\text{P}(\text{Ph})\text{C}_6\text{H}_4\}]$ with thiols : S. M. T. Abedin, K. A. Azam, M. B. Hursthouse, S. E. Kabir, K. M. A. Malik, **M. A. Mottalib** and E. Rosenberg ; *J. Cluster Sci.*, 2001, **12(1)**, 5-22.
39. Reactivity of the unsaturated triosmium cluster $[(\mu\text{-H})\text{Os}_3(\text{CO})_8\text{Ph}_2\text{PCH}_2\text{P}(\text{Ph})\text{-C}_6\text{H}_4]$ with dithiols: X-ray structures of $[\text{Os}_3(\text{CO})_8(\mu\text{-SCH}_2\text{CH}_2\text{CH}_2\text{S})(\text{Ph}_2\text{PCH}_2\text{PPh}_2)]$. $1/2\text{CH}_2\text{Cl}_2$ and $[(\mu\text{-H})\text{Os}_3(\text{CO})_7(\mu_3\text{-}\eta^3\text{-SCH}_2\text{CH}_2\text{CH}_2\text{S})(\text{Ph}_2\text{PCH}_2\text{PPh}_2)] \cdot 1/2\text{H}_2\text{O}$: S. E. Kabir, C. A. Johns, K. M. A. Malik, **M. A. Mottalib** and E. Rosenberg ; *J. Organomet. Chem.*, 2001, **625(1)**, 112-120.
40. New zwitterionic heterocycles derived from 1-chloro(dimethyl)silyl-1-borylalkenes and 2-lithio-1-methylimidazol and 1-lithio-indazole : B. Wrackmeyer, H. E. Maisel, W. Milius, A. Badshah, E. Molla and **M. A. Mottalib** ; *J. Organomet. Chem.*, 2000, **602**, 45-50.
41. Reactivity of $[(\mu\text{-H})\text{Os}_3(\text{CO})_8\{\text{Ph}_2\text{PCH}_2\text{P}(\text{Ph})\text{C}_6\text{H}_4\}]$ with organic heterothiols: X-ray structures of $[\text{H}(\mu\text{-H})\text{Os}_3(\text{CO})_8(\eta^2\text{-pyS})\{\text{Ph}_2\text{PCH}_2\text{P}(\text{Ph})\text{C}_6\text{H}_4\}]$ and $[\text{Os}_3(\text{CO})_8(\mu\text{-}\eta^2\text{-pyS})\{\text{Ph}_2\text{PCH}_2\text{P}(\text{Ph})\text{C}_6\text{H}_4\}]$: S. E. Kabir, K. M. A. Malik, E. Molla and **M. A. Mottalib** ; *J. Organomet. Chem.*, 2000, **616**, 157-164.
42. Dithiolate complexes of ruthenium and osmium: X-ray structures of $[\text{Ru}_2(\text{CO})_6(\mu\text{-SCH}_2\text{CH}_2\text{S})]$ and $[\{(\mu\text{-H})\text{M}_3(\text{CO})_{10}\}_2(\mu\text{-SCH}_2\text{CH}_2\text{CH}_2\text{S})]$ (M=Ru, Os) : K. M. Hanif, S. E. Kabir, **M. A. Mottalib**, M. B. Hursthouse, K. M. A. Malik, and E. Rosenberg; *Polyhedron*, 2000, **19**, 1073-1080.
43. Metallation of 2-methyl-2-thiazoline at a triosmium cluster: X-ray structure of $[(\mu\text{-H})\text{Os}_3(\text{CO})_{10}(\mu\text{-}\eta^2\text{-CH}_2\text{C}=\text{NCH}_2\text{CH}_2\text{S})]$: K. A. Azam, R. Dilshad, S. E. Kabir, **M. A. Mottalib**, M. B. Hursthouse and K. M. A. Malik; *Polyhedron*, 2000, **19**, 1081-1084.
44. Novel triosmium clusters derived from the reaction of $[\text{Os}_3(\text{CO})_{10}(\mu\text{-Ph}_2\text{PCH}_2\text{PPh}_2)]$ with 1-vinylimidazole: J. Akter, K. A. Azam, S. E. Kabir, K. M. A. Malik and **M. A. Mottalib** ; *Inorg. Chem. Commun.*, 2000, **3**, 553-556.
45. Carboxylation of a μ_3 -diazo methylidyne triosmium cluster: S. M. T. Abedin, K. I. Hardcastle, S. E. Kabir, K. M. A. Malik, **M. A. Mottalib**, E. Rosenberg and M. J. Abedin; *Organometallics*, 2000, **19**, 5623-5627.
46. Aspects of triosmium clusters: S. E. Kabir and **M. A. Mottalib**; *Chemical Review*, Jahangirnagar University, Bangladesh, 2000, 25-45.
47. Hydroboration of 1-alkynyl(chloro)silanes-new synthons in heterocyclic chemistry: B. Wrackmeyer, A. Badshah, E. Molla and **M. A. Mottalib**; *J. Organomet. Chem.*, 1999, **584**, 98-102.
48. X-ray structure of $[\text{Os}_3(\text{CO})_{10}(\mu\text{-Ph}_2\text{PCH}_2\text{PPh}_2)]$: K. A. Azam, M. B. Hursthouse, S. E. Kabir, K. M. A. Malik and **M. A. Mottalib**; *J. Chem. Crystallogra.* 1999, **29**, 813-818.

Oral presentation and Abstracts:

1. Synthesis and characterization of chiral $[(\mu\text{-H})_3\text{Os}_3\text{Rh}(\text{CO})_{10}(\text{diphosphine})]$ clusters and an investigation of their catalytic potentiality in the hydrogenation of unsaturated carboxylic acid : **M. A. Mottalib** and E. Nordlander ; *16th Asian Chemical Congress*, BUTE, Dhaka, 2016, Abstract, IC-OP-19.
2. Chromium in tannery wastes water and it's effect on local environment: **M. A. Mottalib**, A. K. Deb, and M. F. Karim; *Bang. Chem. Cong.*; DU, Dhaka, 2004, Abstract, A 11.
3. Reactions of $[(\mu\text{-H})\text{Os}_3(\text{CO})_9\{\mu_3\text{-}\eta^2\text{-C}_9\text{H}_5(4\text{-CH}_3)\text{N}\}]$ and $[(\mu\text{-H})\text{Os}_3(\text{CO})_9\{\mu_3\text{-}\eta^2\text{-C}_9\text{H}_6\text{- N}\}]$ with diazomethane : **M. A. Mottalib**, S. M. T Abedin, K. A. Azam, S. E. Kabir, and K. M. A. Malik ; *Bang. Chem. Soc. Int. Conf.*, DU, Dhaka, 2001, Abstract 16.
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Poster presentation

1. Impact of Fertilizer factories effluent on the surface water of Shitalakhya River, Narsingdi, Bangladesh: A. N. M. Al-razee, M. N. Abser and **M. A. Mottalib**; International Seminar on Fertilizer Factory Effluent, India, March 15-17, 2016.
2. Treatment of tannery effluent using no chemicals: P. Kumar, T. Haque, **M. A. Mottalib** and M. N. Abser; *16th Asian Chemical Congress*, March 16-19, 2016, Dhaka, Bangladesh.

Prof. Dr. Md. Abdul Mottalib