

# Curriculum Vitae



**Name:** Professor Dr. Engr. Dil Afroza Begum

**Date of birth:** 16<sup>th</sup> February 1954

**Husband's Name:** Dr. Engr. Gholam Mostofa

**Present Position:** Member, University Grants Commission (UGC) of Bangladesh

**Nationality:** Bangladeshi

**Present Address:** Flat # 2/C, House # 47, Road-5, Dhanmondi R/A, Dhaka-1205

**Permanent Address:** Vill & Post: Khan Sontala, Ullapara, Sirajganj. Vill: Dakhin Raghampur, Post & District: Pabna.

**Telephone:** +8802 58160102 (Office), Mobile: 01777743667

## ***Service Record:***

<b>Date</b>	<b>Position</b>
May, 2015 to till date	Member, University Grants Commission of Bangladesh
August, 2007 to till date	Selection Grade Professor, Chemical Engg. Dept., BUET
April, 1996 to August, 2007	Professor, Chemical Engineering Department, BUET
April, 1986 to April, 1996	Associate Professor, Chemical Engineering Department, BUET
February, 1982 to April, 1986	Assistant Professor, Chemical Engineering Department, BUET
November, 2009 to September 18, 2012	Head, Chemical Engineering Department, BUET
July, 2005 to July, 2007	Head, Chemical Engineering Department, BUET
March, 1997 to March, 1999	Head, Chemical Engineering Department, BUET

## ***Present Involvements:***

- Besides assisting UGC Chairman in every respects, as Head of Research Support & Publication Division especially following assignments are being carried out:
  - Academic staff development research program for supporting regular research projects;
  - Research support fund for partial financial support to the research activities;
  - UGC Gold Medal for outstanding research work;
  - Prime Minister Gold Medal for outstanding result in faculty;
  - UGC Annual Report publication;
  - Award of MPhil, PhD and Postdoctoral Fellowship;
  - UGC Professorship;
  - Rokeya Chair and
  - UGC Merit Scholarship.
- Chairman, Technical Committee (ICS) of Infrastructure Development Company Limited (IDCOL);
- Member, Board of Accreditation for Engineering and Technical Education (BAETE);
- Adviser, Women Architects, Engineers and Planners Association, Bangladesh;
- Member, Standing Committee of Academy of Sciences for Awarding Fund Regarding Agriculture;

- Life Member, Bangladesh Association for Advancement of Science (BAAS);
- Member, Bangladesh Society for Conservation of Environment (BSCE);
- Fellow, The Institution of Engineers, Bangladesh (IEB);
- Member, Bangabandhu Prokoushali Parishad at IEB;
- Vice-President, Chemical Engineering Alumni Association.

***Recent Special Professional Activities:***

- I. Represented Govt. of Bangladesh at UNESCO Headquarter in Paris in Global Convention Meeting on the Recognition of Higher Education Qualifications (05-07 December 2018);
- II. Represented Bangladesh as Member of the Expert Committee of South Asian University, Delhi for Phase-II (06-08 February 2018);
- III. Convener of Group-2 (Quality) of Higher Education Policy for 2018-2030;
- IV. Member, Unified Recruitment Policy of Universities of Bangladesh;
- V. Chief Editor of “Universities of Bangladesh”, “UGC Profile”, & “UGC Annual Report”;
- VI. Convener of “UGC Gold Medal/UGC Award” , “Prime Minister Gold Medal” and “Reception of Writers of Books Published by UGC”;
- VII. Re-opening of Chemical Complex of BCIC (as consultant);
- VIII. Member, Accreditation Committee for Preparing Act of National Accreditation Council;
- IX. Direction of two documentaries on UGC activities and Higher Education of Bangladesh.

***Former Professional Activities at BUET and Other Organizations:***

- Played active role in different national issues such as Gas Export, Fulbaria Coal Mine, Catalytic Converter, Formulation of Guidelines of Ship Breaking Industry, Feasibility study of Chittagong Chemical Complex, Introduction of CNG fuel in Dhaka city etc.;
- Elected Central Council Member, The Institution of Engineers, Bangladesh (IEB) from 2004 to 2017;
- Member, Editorial Board of the Journal of Chemical Engineering Division and Multidisciplinary Journal of IEB;
- Member, Industrial Advisory Committee of Chemical Engineering Department, BUET;
- Member, Executive Committee of Bangabandhu Parishad at BUET;
- Member, Scrutiny Committee of National Accreditation Council Act;
- Expert Member, Tender Committee of BCSIR;
- Treasurer, Chemical Engineering Alumni Association;
- Vice-President, Women Architects, Engineers and Planners Association, Bangladesh;
- Member, Tender Committee of Chemical Engineering Dept., BUET;
- Chairman, International Conference on Chemical Engineering-2014 (held on 29-30 December 2014);
- Member, Selection Committee, Moderator of Question and Question Paper Setter of Public Service Commission, Government of the People’s Republic of Bangladesh;

- Chairman, Management Committee of Chemical Engineering Development Fund at BUET;
- Member, Bishwabidyalay Parisad, Bangladesh;
- Member, Executive Committee of the Association of Canadian Petroleum Industry Alumni, Bangladesh. This Organization worked on Energy Sector Development of our Country;
- Member, Equivalent Committee of IEB;
- Member Secretary, Task Force on Gas Sector of IEB;
- Convener, Committee of Petrochemical Industries for D-8 countries;
- Gender Advisor, University of Alberta-BUET Linkage Project;
- Member, Local and National Committees of the World University Services (WUS);
- Project Director, “Women Development Project” of WUS;
- Assistant Provost, Chhatri Hall, BUET;
- Chairman (twice), Chemical Engineering Division, The Institution of Engineers, Bangladesh (IEB);
- Vice-Chairman, Chemical Engg. Division, IEB;
- Member, Executive Committee of Engineering University School. This committee established the Engineering University College at BUET;
- Treasurer, Local Committee of WUS at BUET;
- Project Coordinator, Gas Sector Infrastructure Development Project, IEB;
- External Member, Project Proposal Scrutiny Committee of BCSIR;
- Member, Safety Committee formed by The Institution of Engineers, Bangladesh (IEB);
- Secretary, Undergraduate and Post-graduate Board of Studies of Chemical Engg. Dept., BUET;
- External Member, Science Faculty of Dhaka University;
- Editor-in-Charge, Journal of Chemical Engineering Division, IEB;
- Member, Expert Committee for Cosmetics and Lubricating Oils of the Bangladesh Standards and Testing Institution;
- Member, Complete Proposal (1-4<sup>th</sup> round) Evaluation Team of HEQEP of UGC of Bangladesh.;
- Member, Commonwealth Scholarship Selection Committee, UGC of Bangladesh;
- Member, Project Proposal Assessment Committee, UGC of Bangladesh.

***Degrees obtained:***

<b>Educational Institution</b>	<b>Certificate/Degree</b>	<b>Passing Year</b>	<b>Marks</b>	<b>Specialization</b>
Pabna Govt. Girls' High School	S.S.C	1969	76.8%	Science
Pabna Edward College	H.S.C	Exam. of 1971 held in 1972	77.8%	Science
Moscow Institute of Petro-chemical and Gas Industry named after Academician Gubkin I.M.	M.Sc. in Engineering with honors	1978	Excellent (A+) grade in all subjects	(1) Chemical Technology of Oil and Gas Processing; (2) Reaction Engineering;
Do	Ph.D. in Chemical Engineering	1981	-	(3) Environmental Engineering.

***Publications (Total publications: 58, list of publication has been attached herewith)***

<b>Papers Published in Referred Journals/Patent/Newspaper</b>	<b>Papers presented in Conferences</b>	<b>Review Papers/Interim Research Reports submitted to different organizations</b>	<b>Book</b>
Patent :1 (Patented in foreign country)  Papers : 15 (Published in Journals)  Technical Papers published in National Newspapers: 6	International Conference :14  National Conference/Seminar : 6	15	A research article has been published in a book entitled International Series on Chemical Engineering, Utilization of Natural Resources, Chemical Engg. Approach, Editors: H.S. Ray, A.K.Mitra, Publisher: Wiley Eastern Ltd., New Delhi, P. 132-140. (1994)

**Research Interest:**

- a. Oil and Gas Processing;
- b. Energy and Environment;
- c. Reaction Engineering.

**Thesis Guided:**

- I. Undergraduate thesis: More than 100
- II. M.Sc. Thesis: 5
- III. Member, The Doctoral Committee of two Ph.D. Thesis

**Honors and Awards:**

- I. Received “Birshrestha Medal ’88 for Science” offered by the Youth Development Organization in 1989;
- II. Received “University Grants Commission (UGC) of Bangladesh Award-1984” for fundamental work on hydrogenation catalytic system development in 1989;
- III. Received “IEB Best Division Award” (twice) for organizing Chemical Engineering Divisional activities at IEB;
- IV. Honored by ZONTA International, District XXV in recognition of her outstanding achievements and research activities in the field of Chemical Engineering on 12 March 2015.

**Past Sponsored Research Activities, Consultancy and Expert Services:****A) Sponsored Projects:**

Bangladesh Air Pollution Studies, Consultancy Services for Studies on Emission Inventory, Decision Modeling, Source Apportionment, Dust Control, and Industrial Emissions. This contract has been signed between the Department of Chemical Engineering, BUET and NILU (Norway) for the period of 2012-2014. Project team: Dr. Dil Afroza Begum, Mr. Mominur Rahman and Dr. Nooruddin Ahmed. Sponsoring Organization: World Bank, completed in 2015;
JICA sponsored research work related to Air and Water Pollution completed in 2014;
BRTC of BUET sponsored project: A Study of the Behavior of Low Temperature Shift Catalysts prepared under different conditions (Project Director);
BRTC of BUET sponsored project: A Study of Optical and Chemical Properties of Peat Available in Bangladesh (Research Associate);
University Grants Commission sponsored project: A Study of the Factors Affecting the Reactivity of Carbonized Peat Particles from Kola Mouza (Project Director);
IDA sponsored project: The use of Methanol as a Domestic and Industrial Fuel (Research Associate);
Bangladesh Chemical Industries Corporation sponsored project: Characterization of the Activity and Aging Properties of Catalysts (Research Associate);
Received Award from the Ministry of Science & Technology for upgrading of the Laboratory related to Energy and Environment;
Design checking of refineries built in private sector as Expert of Petrobangla;
Team Leader, Ministry of Education sponsored research project entitled “Development of Bio-degradable Plastic Bags in Context of Bangladesh”.

**B) Consultancy Services:**

- I. Power Development Board on “Gavanized Structural Members of High Tension Transmission Lines”;
- II. Padma Oil Company Ltd. on “Gas Chromatographic Analysis”;
- III. Bangladesh Chemical Industries Corporation on “Characterization of the Activity and Aging Properties of Catalysts”;
- IV. Bangladesh Chemical Industries Corporation on “High Temperature Shift (HTS) Converter Catalyst of CUFL”;
- V. Rural Development Project-7, Local Government Engineering Department on “Bitumen Road Emulsions”;
- VI. Filippo Fochi Energia on “Natural Gas Analysis”;
- VII. Foreign and Local organizations on Natural Gas and Gas-condensate Quality Assessment;
- VIII. Union LP Gas Limited on LPG Quality Assessment;
- IX. Power Plants, Brick Field and BOC for air quality monitoring;
- X. Private refineries in Bangladesh to design their plants;
- XI. Ministry of Energy for Checking Design and Operation of Refineries built in Bangladesh by private sector;
- XII. Convenor, “Feasibility Study of Re-opening of Chittagong Chemical Complex”, conducted in-2011;
- XIII. Member, The Committee of “Investigation on KPM Rehabilitation”, conducted in 2011;
- XIV. Co-convenor, The Committee formed to prepare guidelines of ship-breaking industry. These guidelines were prepared in 2011;
- XV. Team Leader of the Design Checking Committee of several gas condensates based atmospheric distillation plants, conducted in 2009 –2014.

**C) Expert Services:**

Worked as an Expert in different committees of DOE, BCIC, BCSIR, BPC, Petro-Bangla, World Bank, Asian Development Bank, Nilu, JICA and Ministry of Industry, Bangladesh,

**Visit to Foreign Countries to carryout Academic Activities:**

	<b>Organization</b>	<b>Year</b>
i.	Worked for three months as Visiting Fellow in the Department of Chemical Engineering of the University of Leeds, UK under the joint research program between BUET and the University of Leeds;	1985
ii.	Attended a short course on Petroleum Industry Development in Canada organized by ASIPIID and financed by CIDA;	1988
iii.	Visited Malaysia to present papers at the CATCON’91 (Asia-Pacific Catalysis Conference, Bangi);	3-5 July 1991
iv.	Visited India to present paper at the National Seminar on Application of Chemical Engineering in the Utilization of Natural Resources, Bhubaneswar, India;	24-25 February 1993
v.	Worked as BUET Technical Expert at the University of Alberta, Canada for the period of 16(sixteen) weeks;	(6.5.96-26.8.96).
vi.	Worked as Visiting Professor for 26 days in the Chemical	February 2004

	Engineering Department of the North Carolina A & T State University, USA;	
vii.	Visited Sarawak , Malaysia to present research paper at the 2 <sup>nd</sup> World Engineering Congress;	July 2002
viii.	Visited Agra, India to present paper at the Better Air Quality Conference;	December 2004
ix.	Visited Bangkok to carryout academic activities of the King Abdullah University of Science & Technology, Saudi Arabia;	December 2007
x.	Visited University of Kitakyushu, Fukuoka, Japan, to attend the International Conference on Environment.	September 2010
xi.	Visited Center for Science and Environment, New Delhi, India to attend the “South Asian Workshop on Natural Gas Vehicle Program;	27 February to 01 March 2012
xii.	Visited UK to present paper at the “International Conference on Environmental Engineering and Technology, London”, organized by the World Academy of Science, Engineering and Technology;	24-25 October 2014
xiii.	Visited Seoul, South Korea to participate in “Management Track Training Program” as a representative of UGC;	21-28 November 2015
xiv.	Visited Delhi, India to attend a seminar on “Teaching-Learning and New Technologies in Higher Education;	24-27 February 2016
xv.	Visited Shanghai, China to attend conference of World Intellectual Property Organization;	17-18 November 2016
xvi.	Visited Maldives to represent the Chairman, UGC in the 11 <sup>th</sup> Meeting of the Committee of the Heads of University Grants Commissions/Equivalent Bodies;	02-03 April 2017
xvii.	Visited India to attend the 3 <sup>rd</sup> Meeting of the Detailed Academic Planning of Phase-11 of South Asian University	6-8 February 2018
xviii.	Visited Paris, France to attend the Global Convention Meeting on the Recognition of Higher Education Qualifications	05-07 December 2018

### ***List of Publications***

#### **A. Main Publications:**

1. Dr. Ruhul Amin, Dr. Dil Afroza Begum, Dr. Abdul Gafur, Study of Process Parameters for Making Biodegradable Linear Low Density Polyethylene in Natural Weathering Conditions. PP.79-90, IOSR Journal of Applied Chemistry (IOSR-JAC), e-ISSN: 2278-5736, Volume 10, Issue 5, Ver. II, May 2017;
2. Begum, D.A., Rahman, M.M., Razia, S.S., (24 October 2014), Impact of Developed Mud-Built Cook-Stoves on Reduction of Indoor Air Pollution Level Prevailing in Rural Bangladesh. PP.770-781, Proceedings of the Conference 24-25 October 2014, London UK. International Scholarly and Scientific Research & Innovation. International Science Index.org, organized by the World Academy of Science, Engineering and Technology;
3. Begum, D.A., Hossain, I., (7-9 October 2012). “Bangladesh Petrochemical and Fertilizer Sector”. 3<sup>rd</sup> Ministerial Meeting on Industry/7<sup>th</sup> Meeting of the Working Group on Industrial Cooperation, WGIC, Dhaka;
4. Begum, D.A., (27 February– 01 March 2012). “Country Paper on CNG Program in Bangladesh”. Presented in “South Asian Natural Gas Vehicle Program” conducted by Centre for Science and Environment, New Delhi, India;

5. Begum, D.A., Ahmed K.M. Tanvir, (12-17 January 2012). "Impact of Regional Cooperation on Reduction of Air and Water Pollution Level of Dhaka City". PP.38-48, Proceedings of the National Seminar, The Institution of Engineers, Dhaka, Bangladesh;
6. Haque Farah, Samain Afrina and Begum D.A., (29-30 December 2011). "Catalytic Degradation of Waste Polyethylene into Liquid Fuel Over Zeolite Catalyst". PP-337, Proceedings of the International Conference on Chemical Engineering;
7. Ahmmed, K.M. Tanvir & Begum, D.A., (04 September 2010). "Air Pollution Aspects of Dhaka City". pp-129-131 Proceedings of ICEAB10, University of Kitakyushu, Fukuoka, Japan;
8. Begum, D.A., & Ahmed K.M. Tanvir, ( 04 September 2010). "Water Quality Aspects in and around Dhaka City". pp-175-178, Proceedings of ICEAB10, University of Kitakyushu, Fukuoka, Japan;
9. Begum, D.A., (January 2005). "Critical Assessment of CNG Technologies used in Bangladesh". Presented at the Seminar organized by the Comilla Centre of the Institution of Engineers Bangladesh;
10. Begum, D.A., (6-8 December 2004). "Air Pollution: A case study of Dhaka City". Presented at the Conference (BAQ-2004) organized by the Society of Indian Automobile Manufacturers at Agra, India;
11. Begum, D.A., Haseeb, A.S.M.A., Khan, Sirajul Haq (22-25 July 2002). "Development of Catalytic Active Materials". Proceedings of 2<sup>nd</sup> World Engineering Congress, Malaysia;
12. Begum D.A., Khan, Sirajul Haq (26-28 December 2001) "Impact of Auto-Exhaust on the Environment: A Case Study of Dhaka City". International Conference on Mechanical Engineering Vol.2, Section-2 (Environment). Organized by the Department of Mechanical Engineering, Bangladesh University of Engineering & Technology, Dhaka-1000, Bangladesh;
13. Begum, D.A. (1999), "Combustion Phenomena of Peat-char Particles of Kola-Mouza Peat". Chemical Engineering Research Bulletin, Vol.11, 1999;
14. Begum, D.A. (1994), "Preparation and characterization of Copper Based Catalyst for Low Temperature Shift Reaction". International Series on Chemical Engineering, Utilization of Natural Resources, Chemical Engg. Approach, Editors: H.S. Ray, A.K. Mitra, Publisher: Wiley Eastern Ltd., New Delhi, PP. 132-140;
15. Poddar, J., Hossain, T., Mannan, Kh.M, Begum, D.A. (1994) "Characterization of Coal Found in the North-Western Zone of Bangladesh". Fuel Science and Technology, vol.13, No.3, p.93-101;
16. Begum, D.A. Ahmed, K, Roy, S.K. Kurshid, A.A., Sunderland, P. and Zaman J. (1994). "Characterization of Steam Reforming Catalysts". Book of Abstracts, 44<sup>th</sup> Canadian Chemical Engineering Conference, Calgary, Alberta, PP.209-210;
17. Zaman, J., Ahmed, K. and Begum, D.A. (1993), "Standardization Test Methods for the Characterization of Industrial Catalysts". Final Program and Abstracts of Presentations, Thirteenth North American Meeting of the Catalysis Society, Hilton Hotel, Pittsburgh, Pennsylvania, PB19;
18. Begum, D.A. (1993), "Promoter's Effect on the Properties of Steam Reforming Catalyst", Chemical Engineering Research Bulletin, Vol. 10, P.64-72;
19. Begum, D.A., Omar, K.I. and Chosh, G.K. (1992), "Methanol Fuel Blends as a Domestic Cooking Fuel". J of the Institution of Engineers, Bangladesh. Vol.20, No.1-2, PP.9-19;



20. Begum, D.A. (1992). Final Report on “A Study of the Factors Affecting the Reactivity of Carbonized Peat Particles from Kola-Mouza (Khulna)” submitted to Bangladesh University Grants Commission, PP.1-44;
21. Begum, D.A. (1992). Final Report on “A Study of the Behavior of Low Temperature Shift Catalysts Prepared Under Different Conditions” submitted to Director, Advisory, Extension and Research Services, PP.1-110;
22. Zaman, J; Zaman, B; Begum, D.A. and Ahmed, K(1991), “Transfer of Technology in Catalyst Characterization Through University-Industry Co-operation”. Proceedings of CATCON’91. Asia-Pacific catalysis conference, Bangi, Malaysia, Vol.1, PP.181-190;
23. Begum, D.A. (1991), “Effect of Some Preparation Variables on the Properties of Low Temperature Shift Catalyst”. Proceedings of CATCON ’91 Asia Pacific Catalysts Conference, July, Bangi, Malaysia, Vol.1. PP. 244-252;
24. Begum, D.A; K, Ahmed and J. Zaman (1991), “Evaluation of Properties of Steam Reforming Catalysts”. Proceedings of CATCON’91, Asia-Pacific catalysis conference, Bangi, Malaysia, Vol.1, PP.65-73;
25. Zaman, J; Begum, D.A., Ahmed, K.and others (1991). Final Report on “Characterization of the Activity and Ageing Properties of Catalyst” submitted to Research and Productivity Division, BCIC, PP.1-356;
26. Begum, D.A. (1991). “Domestic Utilization of Bangladeshi Peat”. Journal of the Institution of Engineers, Bangladesh. Vol.19, No.1-2;
27. Begum, D.A. (1990). “Kinetics and Catalysis of Shift Conversion Reaction”. Department of Chemical Engineering, Bangladesh University of Engineering and Technology, Dhaka;
28. Begum, D.A.; Omar, K.I.; Islam, R. (1989). “Study of Burning Phenomena of High Ash Peat Char Particles in a Flow of Air”. Institution of Engineers (India) Journal-CH. Vol. 70, PP.35-40;
29. Omar, K.I., Ahmed, N; Begum, D.A. and others (1988). “Research on the Use of Methanol as a Domestic and Industrial Fuel” submitted to Ministry of Energy, Power and Mineral Resources, PP.1-275;
30. Begum, D.A. (1988). “Steam Reforming-A Review”. Published from the Department of Chemical Engineering, Bangladesh University of Engineering and Technology, Dhaka, PP.1-32;
31. Hilaly, A.K.; Begum, D.A. (1987). “Thermal Cracking of Distillates of Eastern Refinery Limited”. J. Chemical Engineering Research Bulletin, Vol. 8, PP.11-16;
32. Begum, D.A.; Hossain, T. (1987). “Characterization of Bangladesh Peats in the Kola Mouza, Chanda Beel and Baghia Beel Areas”. International Peat Journal, No.2, PP.12-136;
33. Begum, D.A. (1985). “A Study Report on Peat and its Utilization”. published from the Department of Chemical Engineering, Bangladesh University of Engineering and Technology, Dhaka, Bangladesh, PP. 1-70;
34. Begum, D.A. (1985). “Extraction of Aromatics from Reformate, Kerosine and Diesel”. J. Chemical Engineering Research Bulletin, Vol. 7, PP.11-14;
35. Belov, P.S.; Borunova, N.V.; Ignatov, V.M.; Begum, D.A.; Petukhov, V.A.; Mironova, I.L.; Freidlin, L.Kh. (1984). “Hydrogenation of Unsaturated Hydrocarbons in the Presence of Iron-acetylacetonate with Additives of Aluminum and Tin Chlorides”. J. Neftekhimiya 24(2), PP.185-187;
36. Belov P.S.; Ignatov, V.M.; Begum, D.A. (1983). “Complex of the Iron with Ethylene bis (diphenylphosphine)”. J. Obshei, Khim. 53(12) PP.2798-2799. This article has been abstracted in “Chemical Abstracts”, Vol.100, No.103579h, 1984;

37. Begum, D.A. (1983). "Hydrogenation and Oligomerization of Unsaturated Hydrocarbons in Presence of Ferrocene Containing Compounds". Journal of the Institution of Engineers, Bangladesh, Vol.11, NO.3, PP.17-21;
38. Begum, D.A. (1982). "Hydrogenation of Unsaturated Hydrocarbons in Presence of  $\text{Fec}(\text{acac})_3 - \text{SnCl}_2$  and  $\text{Fe}(\text{acac})_3 - \text{AlCl}_3$  Complex". J. Chemical Engineering Research Bulletin, Vol.6, PP.21-17. This article has been abstracted in "Chemical Abstracts", Vol. 100, No.85038z, 1984;
39. Begum, D.A. (1984). "Hydrogenation and Oligomerization of Unsaturated Hydrocarbons on Iron Complexes". (24 pages) –Abstract of the Ph.D. thesis, Publisher: Moscow Institute of Petrochemical and Gas Industry named after Academician Gubkin I.M;
40. Ignatov, V.M.; Belov, P.S.; Borunova, N.V; Freidlin, L. Kh; Begum, D.A. (1981). "Method of Production of Linear Dimer of Pentadiene-1,3". U.S.S.R. Patent No. 1004331.

#### **B. National Conference Papers and Interim Research Reports:**

1. Begum, D.A. and J. Zaman (1992). "Standardization of Shift Catalyst Test Methods". presented at the 17<sup>th</sup> Bangladesh Science Conference, Salna, Bangladesh. Abstracts: Section VII, P.8;
2. Rahman, K. Quader, A., and Begum, D.A. (1992). "A Report on High Temperature Shift (HTS) Converter Catalyst of CUFL" submitted to Bangladesh Chemical Industries Corporation, Dhaka, PP.1-20;
3. Begum, D.A. (1991). Nine-Month Report on "A-Study of the Behaviour of Low Temperature Shift Catalysts prepared under Different Conditions" submitted to Director, Advisory, Extension and Research Services, BUET, Dhaka;
4. Zaman, J.; Begum, D.A. and Ahmed, K.(1991). 2<sup>nd</sup> Annual Report on "The Characterization of the Activity and Ageing Properties of Catalyst" submitted to Research and Productivity Division. BCIC. PP.1-134;
5. Begum, D.A. (1991). "Reactivity of Peat of Kola-Mouza Peat Field" presented at the 35<sup>th</sup> Convention of the IEB;
6. Begum, D.A. (1990). Six-Month Progress Report on "A Study of the Factors Affecting the Reactivity of Carbonized Peat Particles from Kola-Mouza (Khulna)" submitted to Bangladesh University Grants Commission, PP.1-70;
7. Zaman, J., Begum, D.A. and Ahmed, K. (1990). 2<sup>nd</sup> Six-Month Progress Report on "The characterization of the Activity and Ageing Properties of Catalyst" submitted to Research and Productivity Division BCIC, Dhaka, PP. 1-20;
8. Zaman, J; Begum, D.A. and Ahmed, K. (1989). 1<sup>st</sup> Annual Report on "Characterization of the Activity and Ageing Properties of Catalyst" submitted to Research and Productivity Division, BCIC, Dhaka, PP.1-109;
9. Zaman, J., Begum, D.A., Ahmed K. (1988). Six-Month Progress Report on "The Characterization of the Activity and Ageing Properties of Catalyst" submitted to Research and Productivity Division, BCIC, Dhaka, PP.1-43 pages;
10. Begum, D.A. (1988). "A Study of Burning Phenomena of Suspended Peat Particles" presented at the Thirteenth Annual Bangladesh Science Conference. Abstract: Section VII, P.1;
11. Begum, D.A. (1987). "Characterization of Bangladeshi peat" presented at the 12<sup>th</sup> Annual Bangladesh Science Conference, January 10-14. Abstract: Section VII;

12. Hossain, T. and Begum, D.A. (1984). Six-month Progress Report on “A Study of Optical and Chemical Properties of Peat Available in Bangladesh” submitted to Director, Advisory, Extension and Research Services, BUET.

***C. Papers Published in National Newspapers:***

1. “The Tales of Gas Sector of Bangladesh”. The Independent;
2. “Answer to the Questions raised in Media about Natural Gas Sector of Bangladesh”. The Daily Ittefaq;
3. “Development of Gas Sector of Bangladesh and Some Related Questions”. The Daily Ittefaq;
4. “Utilization of Natural Gas in Context of Bangladesh”. The Daily Ittefaq;
5. “Natural Gas Reserve in Bangladesh and Some Related Questions”. The Daily Ittefaq;
6. “Impact of CNG Based Vehicles on the Air Pollution Control. The Daily Prothm Alo.