

PDS (PERSONAL DATA SHEET) OF MD. KAISER HAIDER

1 Name	Md. Kaiser Haider
2 Father's name	Md. Ali Haider
3 Mother's name	Shahanara Akter
4 Gender	Male
5 Present Address	Nagano State, Ueda City, Post Code: 386-0022, Midorigaoka 1-5-25, Keju M2- 102, Japan.
6 Permanent Address	Village- Rampur (Master Bari), Police Station- Lalmai, Post Office- Choto Sharifpur, District- Cumilla, Bangladesh
7 Date of Birth	19 th July 1990
8 Educational Qualification	Master of Engineering (Biomedical Engineering)

Degree/Diploma/Certificate	Class/Grade/Division	University/Institution/Board	Year
S.S.C.	GPA 5.00 (Out of 5.00)	Jamua High School, Cumilla, Bangladesh	2006
H.S.C.	GPA 5.00 (Out of 5.00)	Notre Dame College, Dhaka, Bangladesh	2008
B.Sc. in Textile Engineering	CGPA 3.88 (Out of 4.00)	University of Chittagong, Chittagong, Bangladesh	2012
Master of Engineering	GPA 2.86 (Out of 3.00)	Graduate School of Science and Technology, Shinshu University, Japan	2022
PhD	Ph.D. Fellow	Graduate School of Medicine, Science and Technology, Shinshu University, Japan	Till to date

9. Field of specialization Nanotechnology, Nanofiber, Nanostructure Development, Biomaterials, Tissue Engineering, Fiber Engineering.

10. Highlights of qualifications

- ❖ Master of Engineering degree with specialization in nanofiber and nanostructure-based biomaterials.
- ❖ Research experience in nanofiber and nanostructure development for more than 4 years.
- ❖ Experience in electrospinning, nanofiber formation techniques, Electron Microscopic imaging, and tissue engineering.
- ❖ Experience in toxicology, cell biology, cell proliferation, and cell attachment characteristics for artificial tissue scaffold development and wound dressings.
- ❖ Industrial experience in Denim manufacturing, especially in finishing and quality Control.
- ❖ Outstanding experience in fabric mercerization, and stenter machine operation in large-scale production.
- ❖ Experience in the stenter coating process of denim fabrics.
- ❖ Experience in root cause analysis (RCA) of fabric faults.
- ❖ Outstanding experience in slasher dyeing, singeing, sanforising, and calendaring process of denim fabrics in large-scale production.
- ❖ Extensive knowledge of denim fabric structure and design, testing of physical parameters of denim fabrics.
- ❖ Extensive knowledge of short-staple spinning of natural fiber and synthetic fiber manufacturing systems.
- ❖ Experience in Thermo-gravimetric analysis (TGA), Spectrophotometer Operation, Soxhlet Extraction, etc.

- ❖ Knowledge of Data analyzing software (Origin, XPS, etc.), MS Office and the Internet.
- ❖ Flexible, responsible, and hard-working team player.

11. Training

a) In country

Organization	Year	Duration		Name of programme
		Mos.	Days	
Bangladesh Jute Research Institute	2019	---	1	Jute Textile Product Research & Development
Bangladesh Jute Research Institute	2019	---	1	Jute Industrial Product Research & Development
Bangladesh Jute Research Institute	2019	---	2	Quality Control on Jute Goods
Bangladesh Jute Research Institute	2019	---	1	জাতীয় শুদ্ধাচার কৌশল বাস্তবায়ন
Bangladesh Jute Research Institute	2019	---	2	Innovation in Public Service
Bangladesh Jute Research Institute	2018	---	3	Data Analysis by Micro-computer
Bangladesh Jute Research Institute	2018	---	2	Modern Office Management
Bangladesh Jute Research Institute	2018	---	3	Development Communication in Agriculture
Bangladesh Jute Research Institute	2018	---	3	Technical Report Writing and Editing
Bangladesh Jute Research Institute	2018	---	3	Research Methodology
Bangladesh Jute Research Institute	2017	---	3	Procurement of goods, works and services
Bangladesh Jute Research Institute	2017	---	3	Training of Trainers for the Dissemination of Industrial Technologies on Jute
Bangladesh Jute Research Institute	2017	---	3	Orientation-Cum-Administrative and Financial Management

b) Abroad

Organization	Year	Duration	Name of programme
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12. Experience

Position	Period		
	From	To	Total Year/Month
Senior Scientific Officer, Machinery Development and Maintenance Department, Mechanical Processing Division, Bangladesh Jute Institute, Head Office, Dhaka, Bangladesh	27.06.2022	Till to date	Till to date

Scientific Officer , Dyeing Department, Chemistry Division, Bangladesh Jute Research Institute, Head Office, Dhaka, Bangladesh	10.07.2016	30.09.2019	5 Years 11 Months 20 Days
Shift Engineer , Production and Quality Assurance Department, Banglabazar, Gazipur, Bangladesh	01.04.2013	09.07.2016	3 Years 3 Months 8 Days

Gained Experiences as Scientific Officer and Senior Scientific Officer:

- Dyeing and different functional finishing of jute fiber, yarn, and fabrics through natural dyes.
- Preparation of a variety of fabric shades through the combination and/or topping of natural and synthetic dyes.
- Extraction of natural dyes and other fiber compounds through soxhlet extraction process.
- Estimation of jute fiber compounds like cellulose, hemicelluloses, lignin, oil%, ash content %.
- Determination of change in weight of any compound due to change in temperature through Thermo gravimetric analysis (TGA).
- Fabric physical parameters like- air permeability, wet ability, cover factor, thermal conductivity testing.
- Calculation of yarn parameters like- yarn twist, yarn count, fineness (microgram per inch) of fiber constituting yarn.
- Spectrophotometric analysis of extracted compounds through UV visible double beam spectrophotometer.
- Viscosity testing of viscous liquids through viscometer and centrifuge operation.
- Identification of presence of responsible groups through Fourier Transform Infrared Spectroscopy (FTIR analysis).

Responsibilities as Shift Engineer:

- ❖ Worked in participation with the Research and Development Department for the development of new denim fabrics.
- ❖ Analysis of the causes of dyeing and sizing faults of Benninger Slasher Dyeing Range.
- ❖ Analysis of the causes of fabric weaving faults of PICKANOL Airjet weaving loom.
- ❖ Analysis of the causes of fabric finishing faults in mercerizing, desizing and Cibitex Denim Line finishing machine.
- ❖ Testing of fabric physical parameters of fabrics such as GSM, EPI×PPI, shrinkage %, Skew displacement %, fabric hand feel and drape, shade matching through washing.
- ❖ Over dyeing of denim fabrics using sulphur dyes in mercerizing machine (Development).
- ❖ Correction of fabric finishing faults through trial and error method in different post processing machines.
- ❖ Heat setting of stretch fabrics (Polyurethane filament as core in weft yarn) in stenter machine.

13. Research area of interest

- Nanofiber
- Nanoparticle
- Electrospinning
- Fiber Engineering
- Nonwoven fabric
- Functional finishing of textiles
- Nanotechnology in textiles
- Dyeing
- Protective Clothing
- Medical textiles

14. Awards/ Distinction

- Primary School Government Scholarship for academic feat in class five (Awarded for the period of 2001 to 2003).
- Secondary School Governmental Scholarship for academic feat in class eight (Awarded for the period of 2004 to 2006).
- Higher Secondary School Government Scholarship for Golden GPA: 5 in class ten (Awarded in 2009).
- Government Scholarship in undergraduate level for GPA: 5 in class eleven (Awarded in 2010).
- Japanese Government Scholarship (MEXT) for Masters and PhD (Awarded from 2019 to till date).

15. Total publications and conferences attended

Research article as Principal author: 9 (Nine)
Review article: 1 (One)
Research article as Co-author: 7 (Seven)
International Conference (Abroad): 3 (Three)

16. Research achievement

No. of Technology Developed: 01 (worked as an associate scientist)
No. of Research Programme
(a) Developed: 03
(b) Supervised: 02
(c) Executed: 02

17 List of Publications:

(a) Paper Published in the Reputed International Journal:

- [1] L. Sun, Y. Cai, **M.K. Haider**, D. Miyagi, C. Zhu, I.S. Kim, Structural design and optimization of metal-organic framework-derived FeOx@C/rGO anode materials for constructing high-performance hybrid supercapacitors, Compos. Part B Eng. 236 (2022) 109812. <https://doi.org/10.1016/j.compositesb.2022.109812>. **IF: 13.1**
- [2] A. Ullah¹, **M.K. Haider**¹, F. Fei Wang, S. Morita, D. Kharaghani, Y. Ge, Y. Yoshiko, J.S. Lee, I.S. Kim, "Clay-corn-caprolactone" a novel bioactive clay polymer nanofibrous scaffold for bone tissue engineering, Appl. Clay Sci. 220 (2022) 106455. <https://doi.org/10.1016/j.clay.2022.106455>. ¹Authors with equal contribution **IF: 5.6**
- [3] F.N. Parin, A. Ullah, A. Yeşilyurt, U. Parin, **M.K. Haider**, D. Kharaghani, Development of PVA–Psyllium Husk Meshes via Emulsion Electrospinning: Preparation, Characterization, and Antibacterial Activity, Polymers (Basel). 14 (2022). <https://doi.org/10.3390/polym14071490>. **IF: 5.00**
- [4] **M.K. Haider**, A. Ullah, M.N. Sarwar, Y. Saito, L. Sun, S. Park, I.S. Kim, Lignin-mediated in-situ synthesis of CuO nanoparticles on cellulose nanofibers: A potential wound dressing material, Int. J. Biol. Macromol. 173 (2021) 315–326. <https://doi.org/10.1016/j.ijbiomac.2021.01.050>. **IF: 8.2**
- [5] **M.K. Haider**, L. Sun, A. Ullah, S. Ullah, Y. Suzuki, S. Park, Y. Kato, Y. Tamada, I.S. Kim, Polyacrylonitrile/Carbon Black nanoparticle/Nano-Hydroxyapatite (PAN/nCB/HA) composite nanofibrous matrix as a potential biomaterial scaffold for bone regenerative applications, Mater. Today Commun. 27 (2021) 102259. <https://doi.org/10.1016/j.mtcomm.2021.102259>. **IF: 3.8**
- [6] **M.K. Haider**, A. Ullah, M.N. Sarwar, T. Yamaguchi, Q. Wang, S. Ullah, S. Park, I.S. Kim, Fabricating antibacterial and antioxidant electrospun hydrophilic polyacrylonitrile nanofibers loaded with AgNPs by lignin-induced in-situ method, Polymers (Basel). 13 (2021) 1–20. <https://doi.org/10.3390/polym13050748>.

IF: 5.00

- [7] M.N. Sarwar, A. Ullah, **M.K. Haider**, N. Hussain, S. Ullah, Evaluating Antibacterial Efficacy and Biocompatibility of PAN Nanofibers Loaded with Diclofenac Sodium Salt, *Polymers (Basel)*. (2021) 1–14. <https://doi.org/10.3390/polym13040510>. **IF: 5.00**
- [8] M. Hashmi, S. Ullah, A. Ullah, Y. Saito, **M.K. Haider**, X. Bie, K. Wada, I.S. Kim, Carboxymethyl cellulose (CMC) based electrospun composite nanofiber mats for food packaging, *Polymers (Basel)*. 13 (2021) 1–12. <https://doi.org/10.3390/polym13020302>. **IF: 5.00**
- [9] A. Ullah, Y. Saito, S. Ullah, **M.K. Haider**, H. Nawaz, P. Duy-Nam, D. Kharaghani, I.S. Kim, Bioactive Sambong oil-loaded electrospun cellulose acetate nanofibers: Preparation, characterization, and in-vitro biocompatibility, *Int. J. Biol. Macromol.* 166 (2021) 1009–1021. <https://doi.org/10.1016/j.ijbiomac.2020.10.257>. **IF: 8.2**
- [10] **M.K. Haider**, D. Kharaghani, L. Sun, S. Ullah, M.N Sarwar, A. Ullah, M. Khatri, Y. Yoshiko, M.Gopiraman, I.S. Kim, Synthesized bioactive lignin nanoparticles/polycaprolactone nanofibers: A novel nanobiocomposite for bone tissue engineering. *Biomaterials Advances*, 144 (213203). <https://doi.org/10.1016/j.bioadv.2022.213203>. **IF: 7.9**
- [11] **M.K. Haider**, D. Kharaghani, I.S. Kim, Lignin-facilitated growth of Ag/CuNPs on surface-activated polyacrylamidoxime nanofibers for superior antibacterial activity with improved biocompatibility. *Int. J. Biol. Macromol.* 242 (2), 124945 (2023). <https://doi.org/10.1016/j.ijbiomac.2023.124945>. **IF: 8.2**
- [12] L. Sun, D. Miyagi, Y. Cai, A. Ullah, **M.K. Haider**, C. Zhu, M. Gopiraman, I.S. Kim, Rational construction of hierarchical nanocomposites by growing dense polyaniline nanoarrays on carbon black-functionalized carbon nanofiber backbone for freestanding supercapacitor electrodes. *Journal of Energy Storage*, 61, 106738 (2023) <https://doi.org/10.1016/j.est.2023.106738>. **IF: 9.4**
- [13] S. Ullah, H. G. Ali, M. Hashmi, **M.K. Haider**, T. Ishaq, Y. Tamada, S. Park, I. S. Kim, Electrospun composite nanofibers of deoxyribonucleic acid and polylactic acid for skincare applications. *Journal of Biomedical Materials Research Part A*, 111 (11), 1798-1807 (2023). <https://doi.org/10.1002/jbm.a.37592>. **IF: 4.9**
- [14] M.X. Chen, **M.K. Haider**, I.S. Kim, J-S. Lee, Characterization of antioxidant *Houttuynia cordata* extracts loaded polyurethane nanofibers. *Fashion and Textiles*, 10 (1), 17, 2023. <https://doi.org/10.1186/s40691-023-00333-z>. **IF: 2.4**

(b) Paper published in Other International & National Journal:

- [1] S. Jafrin, F.A. Dilruba, **M.K. Haider**, Studies on the Suitable Rot-Proof Processes for Manufacturing More Sustainable Jute Based Nursery Pot, *Int. Journal Eng. Appl. Sci.* (2018) 5–8.
- [2] **M.K. Haider**, Z. Ahmed, F.A. Dilruba, S. Jafrin, M. Rahman, Sulphur Black Dyeing of Raw White Stretch Denim Fabrics Using Continuous Mercerizing Machine, *Int. Journal Eng. Appl. Sci.* 5 (2018) 68–70.

(c) Review Articles published in Reputed International Journal

- [1] D. Kharaghani, E. Kaffashsaei, **M.K. Haider**, I.S. Kim, The Effect of Polymeric Nanofibers Used for 3D-Printed Scaffolds on Cellular Activity in Tissue Engineering: A Review. <https://doi.org/10.3390/ijms24119464>. **IF: 2.4**

(d) Seminar/ workshop/symposium proceedings:

- [1] **M.K. Haider**, and I.S. Kim, Lignin-mediated in-situ synthesis of CuO nanoparticles on cellulose nanofibers: A potential wound dressing material, Proceedings of the 74th annual meeting of The Textile Machinery Society of Japan. 74 (2021) 108-109.
- [2] **M.K. Haider**, and I.S. Kim, Lignin-mediated CuO Coating on Electrospun Cellulose Nanofibers for Wound Care, Korean Polymer Society Fall Conference abstracts. 46 (2), (2021) 152.
- [3] **M.K. Haider**, and I.S. Kim, Carbon black nanoparticle/Nano-hydroxyapatite/Polyacrylonitrile (PAN/nCB/nHA) nanofibrous scaffold for bone regeneration, Proceedings of the 75th annual meeting of The Textile Machinery Society of Japan. 75 (2021) 31-32.

18. Membership of Professional Organization

1. Registered Graduate, Chittagong University, Bangladesh.
2. Textile Engineering College Noakhali Alumni Association(Alumni ID: G-03-008).
3. Member, Institute of Textile Engineers and Technologists, Bangladesh.
4. Member, The Textile Machinery Society of Japan.

19. Language skills

Bengali: Fluent in speaking, writing, and reading. Native speaker.

English: Fluent in speaking, writing, and reading.

Hindi and Urdu: Fluent in speaking.

Japanese: Fluent in speaking.

Arabic: Fluent in reading.

20. Researcher Identity

- **GoogleScholar:**
https://scholar.google.com/citations?view_op=list_works&hl=ja&hl=ja&user=x0IUaFoAAAAJ
- **Researchgate**
<https://www.researchgate.net/profile/Md-Kaiser-Haider>



(Md. Kaiser Haider)

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