

Dr. Md. Anisur Rahman



+880 01918864282



anis@uap-bd.edu



+88 01308686146



anis.phy1@gmail.com

Mailing Address: 35/1-D, Shakhari Nagar Lane, Faridabad, Dhaka-1204, Bangladesh.

Research Interest

My current research focuses on nonlinear optical crystals, frequently used in state-of-the-art modern optics and photonics in areas like telecommunications, medical diagnostics, quantum computing, and industrial lasers. Their unique ability to manipulate light enables innovations that would be impossible with linear materials alone.

Professional Experience

University of Asia Pacific	Lecturer (April 15, 2008 – October 02, 2011)
University of Asia Pacific	Assistant Professor (October 02, 2011- Present)

Education

Ph. D. in Physics (2024) from Bangladesh University of Engineering and Technology.

Dissertation: Growth and characterization of amino acid based organic and semi-organic single crystals for nonlinear optical applications.

M. Phil. in Physics (2009) from Bangladesh University of Engineering and Technology.

Dissertation: Effect of additives on the metastable zone width and growth kinetics of some nonlinear optical crystals.

M. Sc. in Physics (2001) from M. M. College (National University), (First Class)

B. Sc. (Honours) in Physics (2000) from M. M. College (National University), (First Class)

H.S.C (1995) from B.A.F Shaheen College, Chittagong (First Division)

S.S.C (1993) from B.A.F Shaheen College, Chittagong (First Division)

Publications

- [1] Anisur Rahman and Jiban Podder, “Effect of EDTA on the Growth Kinetics and Structural and Optical Properties of KDP Crystal.” Hindawi Publishing Corporation, International Journal of Optics, Volume 2010, Article ID 978763, doi:10.1155/2010/978763.
- [2] A. Rahman and J. Podder, “Effect of EDTA on the Growth Kinetics, structural optical and mechanical properties of ADP Crystal.” Indian Journal of Physics, 86(1):15–21, (2012) DOI 10.1007/s12648-012-0003-8.
- [3] A. Rahman and J. Podder, “The Effect of EDTA on the Nucleation Kinetics and Mechanical Properties of KDP Crystal”, Journal of Scientific Research. 4(3), 533-540 (2012).
- [4] M. A. Rahman, M. M. Rahman "Determination of the Metastable Zone Width, Nucleation Kinetics, Structural and Optical Properties of KCl Doped KAP Crystal". Journal of Crystallization Process and Technology, 5, 31-42, (2015), <http://dx.doi.org/10.4236/jcpt.2015.52005>.
- [5] M. A. Rahman, M. M. Rahman and J. Podder, "Investigations on the structure, optical constants and growth aspects of EDTA doped ADP crystal for optoelectronics applications". Bangladesh Journal of Physics, 17, 23-30, (2015).
- [6] M. A. Rahman, M. M. Billah, T. Jahan, N. H. Munni, and M. M. Rahman, “Optical, structural and thermal characterization of pure and bimetallic ion doped kdp crystal”. Bangladesh Journal of Physics, 19, 41-48, (2016).
- [7] মোঃ আনিসুর রহমান, ওরারিঃ সৌরমন্ডলকে দেখার বাসনা, মহাকাশ বার্তা, ৫৮ সংখ্যা, ডিক্টোরেশন নাম্বার-৮০৪/৯১, অক্টোবর ২০২০।
- [8] M. A. Rahman and J. Podder, “Enhanced Metastable Zone Width and Optical Properties of KCl Doped $\text{ZnSO}_4 \cdot 7\text{H}_2\text{O}$ Crystal Grown by Isothermal Evaporation Technique”, Bangladesh J. Sci. Res. 31-33(2): 88-95, (2020).
- [9] Md Anisur Rahman, Jiban Podder, Harinarayan Das, “Growth, structural, thermal, and optical characteristics of L-asparagine monohydrate doped magnesium sulphate heptahydrate semiorganic crystals.” Heliyon, Volume 9, Issue 11, (2023), e22322.
- [10] Md Anisur Rahman, Jiban Podder, Harinarayan Das, “Growth of L asparagine monohydrate doped potassium dihydrogen phosphate semiorganic crystals and its structural, thermal and optical properties,” Optical Materials, Volume 152 (2024) 115491.

- [11] Md Anisur Rahman, Jiban Podder, "Growth of L-asparagine monohydrate organic single crystals: An experimental and DFT computational approach for nonlinear optical applications," *Heliyon*, Volume 10 (2024) e39842.

Conference Presentations

- [1] A. Rahman and J. Podder, "Effect of additives on the width of metastable zone and growth kinetics of KDP crystals," Twenty-First Bangladesh Science Conference, 18-20 February 2009, Organized by: Bangladesh Association for the advancement of science.
- [2] A. Rahman and J. Podder, "Study of nucleation kinetics and characterization of KDP crystal by the addition of EDTA", National Conference on Physics for Development, 10-11 February 2011, Organized by Bangladesh Physical Society.
- [3] A. Rahman and J. Podder, "EDTA effect on the growth kinetics and microhardness properties of KDP crystal." International Conference on Physics of Today, 15-16 March 2012, Organized by Bangladesh Physical Society.
- [4] M. A. Rahman, "EDTA effect as a chelating agent on the growth kinetics and mechanical properties of ADP crystal." International Conference on Physics for Energy and Environment, 06-08 March 2014, Organized by Bangladesh Physical Society.
- [5] M. A. Rahman, J. Podder, H. N. Das, "Investigations on the growth, thermal, structural and optical behaviour of pure and L-Asparagine monohydrate added magnesium sulphate heptahydrate crystals," National Conference on Physics-2023, 9-11 March 2023, Organized by Bangladesh Physical Society.
- [6] M. A. Rahman, J. Podder, H. N. Das, "Growth, structural, thermal and optical characterization of pure and L-asparagine monohydrate added zinc sulphate heptahydrate crystals," International Conference on Physics for Sustainable Development & Technology, 7-8 September, 2023, Organized by Department of Physics, CUET.
- [7] M. A. Rahman, J. Podder, H. N. Das, "Growth of semiorganic L-asparagine monohydrate doped ammonium dihydrogen phosphate crystals and characterization of structural, optical, thermal, electrical and mechanical properties for nonlinear optical applications," 8th Conference of Bangladesh Crystallographic Association, 24-25 November, 2023, Organized by Bangladesh Crystallographic Association & Department of Physics, University of Dhaka.
- [8] M. A. Rahman, J. Podder, H. N. Das, "Growth of L-asparagine monohydrate doped potassium dihydrogen phosphate crystals and its structural, optical, mechanical, thermal, and electrical studies for nonlinear optical applications," 1st International Conference on Advances in Science and Technology, 7-8 December, 2023, Organized by Faculty of Science, BUET.
- [9] M. A. Rahman, J. Podder, "Investigations on structural, optical and thermal properties of L alanine doped potassium dihydrogen phosphate crystals for nonlinear optical applications," International Conference on Physics, Organized by Bangladesh Physical Society, 9-11 May, 2024.

Thesis Supervision

Position	Co-Supervisor
Dissertation	Growth and Characterization of pure and doped bimetallic ions (Mg^{+2} , Ni^{+2}) potassium dihydrogen Phosphate single Crystals.
Student's name	Tania Jahan (Session 2011-2012) MS student Department of Physics, University of Dhaka

Membership & Awards

- [1] Certificate of excellence in reviewing "Asian Journal of Applied Chemistry Research".
- [2] Outstanding service as a project supervisor of UAP Research and Development Exposition 2012, Organized by Institute of Energy, Environment, Research and Development Exposition 2012, University of Asia Pacific, Dhaka, Bangladesh.
- [3] Life member of "Bangladesh Physical Society" (LM T0005)
- [4] 1993 – Prime Minister's Scholarship for Secondary School Certificate Examination
- [5] 1990 - Junior School Scholarship

Skills and Interests

English language proficiency	IELTS Score: 6.5
Technical Software	Xpert High Score Plus, Fullprof, Origin Pro, Vesta, Materials Studio, ChemDraw Ultra, Avogadro, Gauss 09W, Gauss View, Mat Lab.
Computer application	Adobe After Effects, Adobe Illustrator, Adobe Photoshop, Adobe Premiere Pro, Adobe Audition, Maya.
Interest	Travelling, fishing and playing flute.

Personal Profile

Full Name	Md. Anisur Rahman
Father's Name	Md. Azizur Rahman
Mother's Name	Mahmuda Begum
Date of Birth	17-02-1978
Nationality	Bangladeshi (By birth)

References

1. Dr. Jiban Podder
Professor, Department of Physics
Bangladesh University of Engineering and Technology
Email: jpodder59@gmail.com
Phone: +880 01552423766
2. Dr. Md. Mijanur Rahman
Professor, Department of Physics
University of Dhaka.
Email: mmizan@du.ac.bd
Phone: +880 01917745675
3. Dr. Md. Jillur Rahman
Professor, Department of Physics
Bangladesh University of Engineering and Technology
Email: mjrahman@phy.buet.ac.bd
Phone: +88-01552346458