

M.Sc. MOHAMED AEJAZ KOLMANGADI

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Nationality: Indian, Residency Status: Permanent Resident

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PROFESSIONAL SUMMARY

- Experimental Physicist with interdisciplinary research experience in Polymer Physics & Engineering, Physical Chemistry, and nano technology working on High performance Polymers, Nanocomposites, Hydrogels, and Liquid Crystals.
- Expertise in Polymer Characterization (Dielectric Spectroscopy, Advanced Calorimetry) and Data Analysis, acquired through working in various projects and internships.
- Strong communication and presentation skills acquired through several contributed and invited talks in both academia and industry. Self-initiator and excellent collaborator resulting in both national and international collaborations.

WORK EXPERIENCE

Doctoral Researcher, Bundesanstalt für Materialforschung und-prüfung (BAM)

Research Associate in Physical and Chemical Analysis of Polymers

Advisor: Prof. Dr. Andreas Schönhals

Feb'20 - Now

Berlin, Germany

- Designed and executed experiments to study the dynamics and charge transport of bulk and finite Ionic liquid crystals
- Wrote Python package to automate data analysis. [GitHub](#)
- Mentored PhD and master students; Participated in Project Management, and related workshops
- Communicated results at international conferences in Germany, USA, Spain, and France

Visiting Researcher, Institute of Physics, University of Mainz

Computer Simulation of Ionic Liquid Crystals

Advisor: Dr. Arash Nikoubashman

Jul'22 - Now

Mainz, Germany

- Molecular modeling of Ionic Liquid Crystals (charged soft matter)
- Setting up simulation and analysing high throughput data

Summer Researcher, Glass and Time Centre, Roskilde University, Denmark

Computer Simulation of Liquid Crystals

Mentor: Prof. Dyre & Ingebrigtsen

Aug'21 - Oct'21

Roskilde, Denmark

- Trained in Computational Chemistry / Physics - High performance computing
- Simulation and Data analysis / visualization.

Master's Researcher, Bundesanstalt für Materialforschung und - prüfung (BAM)

Characterization of High Performance Polymers for Gas separation applications

Oct'18 - Jan'20

Berlin, Germany

- Initiated, Designed, and executed experiments to study the dynamics of soft materials
- Solution processing of high performance polymers
- Master Thesis: "*Dielectric and Calorimetric Properties of Super Glassy Polynorbornene Films*". **Grade: 1,3 (Very Good)**

Research and Development Engineer, Sheenlac Paints, India

Quality Control and Development of Paint Formulations

Nov'16 - Jun'17

Chennai, India

- Involved in Formulation and testing of Wood coatings. Testing of paints, adhesive strength, accelerated UV testing
- SAP - Materials Management.
- Involved in development of wood stains for aesthetic coatings - Development of colored stains using various pigments to meet the market requirements

TECHNICAL SKILLS AND LANGUAGES

- **Specialized Techniques:** Impedance Spectroscopy, Fast Scanning Calorimetry, Nanofabrication
- **Programming:** Python (Advanced), matplotlib, LATEX
- **Simulation Techniques:** Molecular Dynamics, Numerical Simulation, Data preparation, processing, and analysis using (python, numpy, scipy, pandas, & OVITO)
- **Languages:** English (Fluent), German (B1), Hindi (Fluent), Tamil (Native)

EDUCATION

Technische Universität Berlin
Dr. - Ing Degree

Feb'20 - May'23
Expected May'23

Technische Universität Berlin
M.Sc. Polymer Science

Oct' 17 - Jan '20
GPA: 1,6 (1 being highest)

BSA Crescent University, Chennai, India
Bachelors Polymer Technology

2012-2016
CGPA 9.22/10, (10 being highest)

SELECTED PUBLICATIONS

Selected **three** of **twelve** publications. H-index: **5**

- **M. A. Kolmangadi**, P. Szymoniak, G. J. Smales, D. A. Alentiev, M. Bermeshev, M. Böhning, A. Schönhals, **Macromolecules** 2020, 53, 7410.
- **M. A. Kolmangadi**, P. Szymoniak, R. Zorn, M. Böhning, M. Wolf, M. Zamponi, A. Schönhals, **Polymer Engineering & Science** 2022, 62, 2143.
- **M. A. Kolmangadi**, G. J. Smales, L. ZhuoQing, A. Yildirim, E. Wuckert, S. Eutonnat, F. Demel, P. Huber, S. Laschat, A. Schönhals, **J. Phys. Chem. C** 2022, 126, 10995.

SELECTED TALKS AND PRESENTATIONS

- International Dielectric Society Online Meeting, Sep'2020, Invited contribution
- Deutsche Physikalische Gesellschaft Online Meeting, Mar'2021, Invited contribution
- American Physical Society (APS) March Meeting, Mar'2022, Chicago, USA
- International Dielectric Society (IDS) conference, Sep'2022, San Sebastian, Spain
- CONFIT International Meeting, Institute Laue Langevin, Oct'22, Grenoble, France

SELECTED AWARDS AND HONORS

- BASF Summer Fellowship, awarded to only *50* candidates across the globe each year to attend International summer course. Ludiwgshafen, Germany, Aug'22
- MatChIng Camp. Sponsored to *10* participants across the department each year to take part in Academic writing workshop sponsored by BAM. Berlin, Germany, Oct'22
- Villum Foundation Summer Fellowship, awarded to *6* students to conduct research at Roskilde University. Roskilde, Denmark, Aug'21
- Summer Research Fellowship, Indian Institute of Technology (IIT), Madras, received stipend to carry out summer research. Chennai, India, May'15 - Jun'15
- Overall **First Rank Holder**, University Examinations, Crescent University. May'16, Chennai, India
- Cleared Graduate Aptitude Test in Engineering (GATE) with 88% percentile. Mar'16, India