Rifat Fatema, Ph.D.
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EDUCATION:

- **Ph.D. in Physics**

Florida State University, Tallahassee, Florida, Spring 2009
Dissertation: Helium Atom Scattering Study of the Surface Structure and Dynamics of KCl(001) and Potassium Tantalate ($KTaO_3$) Doped with Lithium and Niobium.

- **M.S. in Physics**

Florida State University, Tallahassee, Florida, Fall 2004

- **M.S. in Physics**

University of Dhaka, Dhaka, Bangladesh, 1998
Thesis: Study and Analysis of Lung Function of Garment Workers of Bangladesh Using Spirometer.

- **B.S., Physics**

University of Dhaka, Dhaka, Bangladesh, 1997

TEACHING EXPERIENCE

- **Florida State University-Panama City Campus, Panama City, Florida**

August 2013-present
Courses teaching

- PHY-2048C: General Physics I
- PHY-2049C: General Physics II

- **Gulf Coast State College, Panama City, Florida**

August 2009-present
Courses teaching/taught

- PHY-1023: Survey of General Physics I
- PHY-2053: College Physics I
- PHY-2053L: College Physics I Lab
- PHY-2054: College Physics II
- PHY-2054L: College Physics II Lab
- PHY-2048: University Physics I
- PHY-2048L: University Physics I Lab

- **Fastpacks Course Facilitator**

January 2010-April 2010
Responsibilities include teaching online Fastpacks Physics 6-12 and Mathematics 6-12 courses for middle and high school teachers who intend to pass the Florida Teacher Certification Examination (FTCE).

- **Fastpacks Curriculum Developer**

August 2009-August 2010
Responsibilities include developing 2nd phase of the Fastpacks Physics 6-12 course for middle and high school teachers who intend to pass the Florida Teacher Certification Examination (FTCE).

- **Florida State University, Tallahassee, Florida**

August 2008- April 2009
Teaching Assistant:
Courses taught:

- PHY-2054L: College Physics II Lab
- PHY-2048L: University Physics I Lab

- **Florida State University, Tallahassee, Florida**

August 2007-December 2007
Teaching Assistant:
Edited the \Fundamental Physics (PHY-1020) Laboratory Manual".

- **Florida State University, Tallahassee, Florida**

August 2001- April 2002
Teaching Assistant:
Courses taught:

- PHY-2048L: University Physics I Lab
- PHY-2049L: University Physics II Lab

RESEARCH EXPERIENCE

- **Florida State University**

May 2002- May 2009
Research Assistant: Conduct research using helium atom scattering experiment in order to study the lattice dynamics and surface structure of alkali halides and potassium tantalate with various lithium and niobium concentrations.

- **University of Dhaka**

1997-1998
Research Assistant: Conduct research on garment workers who were exposed to fabric dust, an investigation of their lung function level, assessment of the effect of long and short term exposure, and comparison between male and female exposed groups were made.

PUBLICATIONS

1. *Polar Catastrophe and the Structure of $KTa_{1-x}Nb_xO_3$ Surfaces: Results from Elastic and Inelastic Helium Atom Scattering:* F.A. Flaherty, T.W. Trelenberg, J.A. Li, Rifat Fatema, J. G. Skofronick, D. H. Van Winkle, S.A. Safron and L. A. Boatner, Phys. Rev. **B 92**, 035414 (2015).

2. *Surface Structure of Lithium Doped Potassium Tantalate ($KTaO_3$: Li) using Helium Atom Scattering:* Rifat Fatema, S.A. Safron, J. G. Skofronick, D. H. Van Winkle, F.A. Flaherty and L. A. Boatner, Phys. Rev. **B 87**, 085419 (2013).

3. *Helium atom scattering from $KTa_{0.7}Nb_{0.3}O_3$ (001): Anomalous surface reflectivity with varying surface temperature and helium wavevector :* Rifat Fatema, T.W. Trelenberg, J. G. Skofronick, D. H. Van Winkle, S.A. Safron, F.A. Flaherty and L. A. Boatner, Phys. Rev. **B 84**, 144114 (2011).

4. *Surface structure of niobium-doped potassium tantalate $KTa_{1-X}Nb_XO_3$ obtained from helium atom scattering studies:* T.W. Trelenberg, Rifat Fatema, E.A. Akhadov, J.A. Li, S.A. Safron, J. G. Skofronick, D. H. Van Winkle, F.A. Flaherty and L. A. Boatner, J. Phys.: Condens. Matter **22**, 304009-304017 (2010).

5. *Surface Lattice Dynamics of KCl(001): A High-Resolution Helium Atom Scattering Study*: Rifat Fatema, David H. Van Winkle, J.G. Skofronick, Sanford A. Safron, and F.A. Flaherty, Phys. Rev. **B 77**, 024305 (2008).

6. *Surface Lattice Dynamics of Rutile TiO_2(110) Using Helium Atom Surface Scattering:* E.A. Akhadov, S.A. Safron, J.G. Skofronick, D.H. Van Winkle, F.A. Flaherty and Rifat Fatema , Phys. Rev. **B 68**, 035409 (2003).

7. *Anthropometric and Lung Function Values of Bangladeshi Garment Workers:* Shamima Chowdhury and Rifat Fatema, Asiat. Soc. Bangladesh Sci. **24(2)**, 267-271 (1998).