



HARVARD
UNIVERSITY

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Department of Physics
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Dear members of the search committee,

I am writing to apply for the open Assistant Professor position in the Department Physics at Texas Tech University. I am currently working as a postdoctoral fellow under supervision of Professor George Whitesides. Prior coming to Harvard I was an Assistant Professor of Physics at the University of Mazandaran.

I plan to build an internationally recognized lab based on the intersections of my areas of expertise: i) environmental and biomedical applications of nanomaterials, ii) magnetic levitation-based separation and diagnosis, and iii) origin of life. My proposed work follows from my past research experience spanning visible-light active photocatalytic nanomaterials prepared by electrical discharge in liquids, graphene-based nanocomposites in nanomedicine together with the use of magnetic levitation technique for density-based separation of a wide range of (bio)materials. My research expertise will be a complementary addition to the other faculty members in the Department of Physics, which in turn provide the opportunity for impactful collaborations. In addition to research, I have earned experience in grant writings which allow me to meaningfully apply for external funding, both independently and in collaboration with other faculty members.

I also plan to develop a multidisciplinary group of students and postdocs using my experiences on supervising 19 undergraduates, 23 masters, and 3 PhD students at the University of Mazandaran. These prior experiences will also help me to bring dedication and enthusiasm to my research and course students.

My background in physics and nanoscience, enthusiasm for science education and graduate research, and commitment to campus service are all strengths I bring to the Department Physics at Texas Tech University. I look forward to hearing from the committee and wish you the best of luck in finding the ideal candidate.

Sincerely, 

Ali Akbar Ashkarran, PhD