

Nanoscience and Technology Division  
Argonne National Laboratory  
9700 S. Cass Ave., Lemont, IL 60439

July 12, 2020

**Letter of Recommendation for Dr. Qingkai Qian**

Dear search committee,

I strongly recommend Dr. Qingkai Qian, a postdoctoral research associate at the Pennsylvania State University, for the faculty position in your institute. I am a staff scientist at Argonne National Laboratory. In December 2018, Prof. Shengxi Huang, Qingkai's supervisor at the University of Pennsylvania State University, and I initiated a collaboration that has led to a publication in *Nanoscale*. Hence, I have interacted with Qingkai as a collaborator and am providing a letter of support from this perspective.

As strongly evident from his curriculum vita, Qingkai will carry very strong academic credentials as a faculty member at your institute. He has been an unusually productive and successful postdoctoral research associate, and has positioned himself well to compete for the faculty position. As noted above, Qingkai has worked with me on a collaborative project in which he has been the key contributor. The project involved using high-resolution single photon spectroscopy to study atomic defects in monolayer transition metal chalcogenides. The successful implementation of the project not only requires multidisciplinary knowledge in monolayer transition metal chalcogenide material preparation, high-resolution optical spectroscopy and physical modeling, many of which were new techniques to Qingkai, but also the efficient communication and coordination skills among collaborators. During the project, I am not only impressed by Qingkai's ability to quickly learn and master new techniques, but also with how he spontaneously and gently leads collaborative teams among his colleagues, and keep our joint efforts on track week after week with thoughtful questions and suggestions for the next steps. These outstanding capabilities make me assert that Qingkai will excel both as an individual researcher and in collaborative endeavors at your institute.

In summary, Qingkai is an exceptional postdoctoral research associate with an unusually productive research track record and great potential for the future. In addition to his evident technical ability, Qingkai is a clear leader who has forged several collaborations both within and outside his research group. With his combination of attributes, I am confident that he will make a terrific colleague and be an exceptional candidate for the faculty position.

Sincerely,

A handwritten signature in black ink, appearing to be 'Xuedan Ma', written in a cursive style.

Xuedan Ma

Assistant Scientist, Argonne National Laboratory  
CASE Fellow, University of Chicago  
NAISE Fellow, Northwestern University