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U.S. Citizenship
and Immigration
Services

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FILE:

SRC 07 800 18458

Office: TEXAS SERVICE CENTER Date:

MAR 05 2009

IN RE:

Petitioner:

Beneficiary:

PETITION: Immigrant Petition for Alien Worker as a Member of the Professions Holding an Advanced Degree or an Alien of Exceptional Ability Pursuant to Section 203(b)(2) of the Immigration and Nationality Act, 8 U.S.C. § 1153(b)(2)

ON BEHALF OF PETITIONER:

INSTRUCTIONS:

This is the decision of the Administrative Appeals Office in your case. All documents have been returned to the office that originally decided your case. Any further inquiry must be made to that office.

John F. Grissom, Acting Chief
Administrative Appeals Office

DISCUSSION: The Director, Texas Service Center, denied the employment-based immigrant visa petition. The matter is now before the Administrative Appeals Office (AAO) on appeal. The appeal will be sustained and the petition will be approved.

The petitioner seeks classification pursuant to section 203(b)(2) of the Immigration and Nationality Act (the Act), 8 U.S.C. § 1153(b)(2), as a member of the professions holding an advanced degree. The petitioner seeks employment as a research scientist at Pacific Northwest National Laboratory (PNNL), Richland, Washington. The petitioner asserts that an exemption from the requirement of a job offer, and thus of a labor certification, is in the national interest of the United States. The director found that the petitioner qualifies for classification as a member of the professions holding an advanced degree but that the petitioner had not established that an exemption from the requirement of a job offer would be in the national interest of the United States.

On appeal, the petitioner submits a brief from counsel and copies of exhibits already in the record.

Section 203(b) of the Act states, in pertinent part:

(2) Aliens Who Are Members of the Professions Holding Advanced Degrees or Aliens of Exceptional Ability. --

(A) In General. -- Visas shall be made available . . . to qualified immigrants who are members of the professions holding advanced degrees or their equivalent or who because of their exceptional ability in the sciences, arts, or business, will substantially benefit prospectively the national economy, cultural or educational interests, or welfare of the United States, and whose services in the sciences, arts, professions, or business are sought by an employer in the United States.

(B) Waiver of Job Offer.

(i) . . . the Attorney General may, when the Attorney General deems it to be in the national interest, waive the requirements of subparagraph (A) that an alien's services in the sciences, arts, professions, or business be sought by an employer in the United States.

The director did not dispute that the petitioner qualifies as a member of the professions holding an advanced degree. The sole issue in contention is whether the petitioner has established that a waiver of the job offer requirement, and thus a labor certification, is in the national interest.

Neither the statute nor the pertinent regulations define the term "national interest." Additionally, Congress did not provide a specific definition of "in the national interest." The Committee on the Judiciary merely noted in its report to the Senate that the committee had "focused on national interest by increasing the number and proportion of visas for immigrants who would benefit the United States economically and otherwise. . . ." S. Rep. No. 55, 101st Cong., 1st Sess., 11 (1989).

Supplementary information to the regulations implementing the Immigration Act of 1990 (IMMACT), published at 56 Fed. Reg. 60897, 60900 (November 29, 1991), states:

The Service [now U.S. Citizenship and Immigration Services] believes it appropriate to leave the application of this test as flexible as possible, although clearly an alien seeking to meet the [national interest] standard must make a showing significantly above that necessary to prove the “prospective national benefit” [required of aliens seeking to qualify as “exceptional.”] The burden will rest with the alien to establish that exemption from, or waiver of, the job offer will be in the national interest. Each case is to be judged on its own merits.

Matter of New York State Dept. of Transportation, 22 I&N Dec. 215 (Commr. 1998), has set forth several factors which must be considered when evaluating a request for a national interest waiver. First, it must be shown that the alien seeks employment in an area of substantial intrinsic merit. Next, it must be shown that the proposed benefit will be national in scope. Finally, the petitioner seeking the waiver must establish that the alien will serve the national interest to a substantially greater degree than would an available U.S. worker having the same minimum qualifications.

It must be noted that, while the national interest waiver hinges on prospective national benefit, it clearly must be established that the alien’s past record justifies projections of future benefit to the national interest. The petitioner’s subjective assurance that the alien will, in the future, serve the national interest cannot suffice to establish prospective national benefit. The inclusion of the term “prospective” is used here to require future contributions by the alien, rather than to facilitate the entry of an alien with no demonstrable prior achievements, and whose benefit to the national interest would thus be entirely speculative.

We also note that the regulation at 8 C.F.R. § 204.5(k)(2) defines “exceptional ability” as “a degree of expertise significantly above that ordinarily encountered” in a given area of endeavor. By statute, aliens of exceptional ability are generally subject to the job offer/labor certification requirement; they are not exempt by virtue of their exceptional ability. Therefore, whether a given alien seeks classification as an alien of exceptional ability, or as a member of the professions holding an advanced degree, that alien cannot qualify for a waiver just by demonstrating a degree of expertise significantly above that ordinarily encountered in his or her field of expertise.

[REDACTED] of the University of Delaware provided the most concise discussion of the petitioner’s current area of inquiry, stating: “Titanium dioxide (TiO₂) is a photocatalyst that has potential for hydrolysis, i.e., [to] break water into hydrogen and oxygen. Were the hydrogen collected, it could be used as a fuel. The hydrogen fuel can reduce US energy dependence on foreign oil.”

University of Washington [REDACTED] is Editor-in-Chief of *Surface Science* and, more significantly for our purposes here, he is “currently serving as Codirector for Pacific Northwest

National Laboratory and University of Washington Joint Institute for Nanoscience.” [REDACTED] stated:

Fundamental understanding of catalytic properties of matter that occur at the atomic level to underlie revolutionary advances will contribute to improvements in catalysis, manufacturing, high performance materials and environmental technologies.

[The petitioner’s] achievements have significantly benefited the US national interests in this area. . . .Atomic/molecular level surface science can provide ultimate ways to produce higher performance materials by arranging single atoms for designated purposes. [The petitioner] has already worked on atomically resolved studies of surface catalytic reactions of organic molecules on oxide surfaces using variable temperature scanning tunneling microscopy (STM) and synthesis and characterizations of oxide/oxide nanostructures and their catalytic chemistry.

[The petitioner’s] research has led to remarkable original research discoveries in this direction. She has not only made significant original research contributions in the surface chemistry of water and alcohols on TiO₂ surface, but she has also succeeded in studying [the] oxide surface itself. The atomic level observed surface chemistry of alcohols and water lead to a better understanding [of] how these molecules’ splitting on oxide surfaces emit hydrogen, which is one of [the] most important alternative energies. [The petitioner] has succeeded in observing the dynamic of oxygen vacancies on TiO₂ surface for the first time using atomic resolution STM as well.

[REDACTED] of the University of Texas at Austin is the Director of the Institute of Interfacial Catalysis (IIC) at PNNL. Prof. [REDACTED] stated:

During her two an half [*sic*] years in my group, [the petitioner] has conducted fundamental investigations on metal-oxide catalysts and has explored the possibility of using metal oxide catalysts for a variety of catalytic purposes including partial oxidation of hydrocarbons to make valuable liquid fuels and[] potentially to produce hydrogen from water using sunlight. . . . [The petitioner’s] contribution in this field is both significant and substantial. . . .

There is no doubt in my mind that [the petitioner] is one of the world’s leading young researchers in this field.

[REDACTED] deemed the petitioner’s “studies . . . an experimental tour-de-force since they required that adsorption from background contaminants such as water be avoided during the long (often several hours) observation times. Notably, all prior groups have failed in this endeavor, leading to great confusion in the published literature.”

who served as an evaluator of a project that the petitioner conducted at PNNL, stated:

[The petitioner's] discovery leads to an ultimate understanding of the water splitting mechanism on catalytic surfaces and can help researchers find catalysts for the design of materials required to produce hydrogen by using sunlight to split water. This technology ultimately will reduce U.S. total reliance on coal, gasoline and natural gas. . . .

[The petitioner] originally developed a novel method for STM tip fabrication. The STM can obtain images of conductive surfaces at an atomic scale [of] 2×10^{-10} m or 0.2 nanometers, and also can be used to manipulate individual atoms, trigger chemical reactions, or reversibly produce ions by removing or adding individual electrons from atoms or molecules. STM has an extremely sharp stylus that scans the surface. The stylus is so sharp that its tip consists only of one atom. The performance of STM is dominated by the status of the STM tip. [The petitioner] developed a sputtering method in ultra-high vacuum chamber to improve the STM tip's stability and longevity. This discovery can improve the real atomic resolution observation window to get surface reactions at the atomic level. . . .

[The petitioner's] pioneering discovery on dynamics of oxygen vacancies on TiO₂ [sic] surfaces with atomic resolution high temperature STM provides a benchmark for further studies in this field.

[redacted] of the University of Innsbruck, Austria, stated:

[The petitioner] worked as a postdoctoral researcher in our group from December 2002 until August 2004. . . .

Fuel cells are very useful as power sources in mobile and/or remote locations, . . . [and] emit only water and heat as waste, and are thus benign to the environment. Platinum (Pt) is being studied due to its importance as a catalyst in fuel cell systems. Pt in an H/Pt(110) system is known as an excellent model system for a Pt cathode in fuel cells. Understanding of this system helps in the technological application of Pt in hydrogen fuel cells. Despite numerous studies existing already, [the petitioner] succeeded during her research studies in Innsbruck in discovering a novel and unexpected hydrogen bonding site on platinum and thus in considerably improving the current understanding of the geometry and energetics of the H/Pt(110) system. . . .

In her most recent result on surface dynamics on TiO₂, she achieved the first observation of the movement of oxygen vacancies on TiO₂ surface with true atomic resolution. . . . These discoveries allow us to fathom how these molecules decompose to produce hydrogen, which is very promising as an important alternative means for producing energy.

[REDACTED] of Texas A&M University stated that the petitioner's "studies form the basis for a better understanding that will lead to finding more efficient catalysis for sustainable, renewable energy. . . . [B]oth the potential and already realized impact of [the petitioner's] work is quite significant."

The petitioner submitted copies of her published work, along with documentation showing 22 independent citations of that work. The citation record by itself is moderate, consisting of several articles each cited between one and six times.

On December 6, 2007, the director issued a request for evidence, stating that the petitioner had failed to distinguish herself sufficiently from others performing similar research in the same specialty. In response to the notice, the petitioner submitted copies of 12 papers, some newly published, that contain citations of her published work, showing a pattern of increasing international citation of the petitioner's work.

The petitioner also submitted seven new letters, all from witnesses outside of PNNL, although some witnesses have collaborated with PNNL researchers. [REDACTED] of the University of Alabama stated:

I am widely regarded as a world leader in the application of numerical simulation methods to chemical problems in a wide range of areas. . . .

Through my research efforts and collaborations with staff at the Pacific Northwest National Laboratory as part of our joint catalysis project, I am very aware of [the petitioner's] work on surface science and its applications to catalysis. . . . [The petitioner's] work presents the clearest images about how oxygen vacancies move in crystal lattices and have significant technological implications. Furthermore, she proved that water molecule dissociation on TiO_2 surfaces produces two different hydroxyl groups. This work overcame a major obstacle that had thwarted the efforts of many others in the field. As such, it is a milestone in Scanning Tunneling Microscopy tip chemistry and shows the significance of [the petitioner's] contributions.

[REDACTED] stated:

[The petitioner] showed that a single hydrogen atom from a water molecule hops across the titanium oxide surface, while what remains of the water molecule stays fixed, suggesting that the electronic structure of this popular catalyst are not entirely as they seem [sic]. This discovery is promising for developing technologies that use sunlight to split water to generate hydrogen, which is the cheapest, cleanest and most abundant energy source ever developed: the main by-products would be oxygen and water.

[REDACTED] at Idaho National Laboratory, stated:

I have not worked or collaborated with [the petitioner] directly, but I am familiar with her work and reputation; she comes highly recommended from my [redacted] (recently deceased) and my colleague [redacted] with whom she did post-docs. Based on my stature in the field as a leading expert, it is my professional opinion that [the petitioner] has an outstanding reputation in the field of surface science and catalysis for a young, early-career scientist. This reputation is justly deserved from the numerous important publications published in highly-ranked international journals in the physical chemistry field.

[The petitioner's] contributions regarding TiO_2 systems involving water and alcohols adsorption and splitting are extremely exciting developments in our field. . . . Her work clearly provides a new scientific basis for preparation of novel catalytic materials.

[redacted] at Brookhaven National Laboratory, called the petitioner "one of the leading scientists in the area of metal oxides surface catalytic science," whose "seminal work is accelerating my own research."

Outside the United States, [redacted] of Utrecht University, the Netherlands, stated that the petitioner's "research has significantly impacted the field of surface science, particularly in the area of high performance catalysts and new energy."

[redacted] of the University of Sherbrooke, Canada, stated that the petitioner's "discovery is one of [the] most exciting recent results in the research on oxide catalysts."

[redacted] of Heriot-Watt University, Edinburgh, Scotland, stated that the petitioner's "method clearly leads to great progress in fundamental study on catalytic reaction mechanisms."

The director denied the petition on April 17, 2008. In the decision, the director acknowledged that the petitioner "has extensive experience more specifically in the process of catalysis, and how it relates to TiO_2 catalyst surfaces," but otherwise offered little discussion of the evidence submitted.

On appeal, counsel argues that the director gave insufficient consideration to evidence and statements that supported approval of the petition. Upon consideration, the AAO concurs with this assertion. Several independent witnesses offered strong, consistent, and detailed statements in support of the petition, establishing the importance of the petitioner's work rather than simply asserting that the petitioner shows promise in an important area of research. Supporting these statements is documentary evidence showing that others are citing the petitioner's work at an accelerating rate.

It does not appear to have been the intent of Congress to grant national interest waivers on the basis of the overall importance of a given field of research, rather than on the merits of the individual alien. That being said, the evidence in the record establishes that the scientific community recognizes the significance of this petitioner's research rather than simply the general area of research. The benefit of retaining this alien's services outweighs the national interest that is inherent in the labor certification

process. Therefore, on the basis of the evidence submitted, the petitioner has established that a waiver of the requirement of an approved labor certification will be in the national interest of the United States.

The burden of proof in these proceedings rests solely with the petitioner. Section 291 of the Act, 8 U.S.C. § 1361. The petitioner has sustained that burden. Accordingly, the decision of the director denying the petition will be withdrawn and the petition will be approved.

ORDER: The appeal is sustained and the petition is approved.