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U.S. Department of Homeland Security
U.S. Citizenship and Immigration Services
Office of Administrative Appeals
20 Massachusetts Ave., N.W., MS 2090
Washington, DC 20529-2090



U.S. Citizenship
and Immigration
Services

DATE:

OCT 10 2014

Office: TEXAS SERVICE CENTER FILE:

IN RE:

Petitioner:

Beneficiary:

PETITION: Immigrant Petition for Alien Worker as an Alien of Extraordinary Ability Pursuant to Section 203(b)(1)(A) of the Immigration and Nationality Act, 8 U.S.C. § 1153(b)(1)(A)

ON BEHALF OF PETITIONER:

SELF-REPRESENTED

INSTRUCTIONS:

Enclosed please find the decision of the Administrative Appeals Office (AAO) in your case.

This is a non-precedent decision. The AAO does not announce new constructions of law nor establish agency policy through non-precedent decisions. If you believe the AAO incorrectly applied current law or policy to your case or if you seek to present new facts for consideration, you may file a motion to reconsider or a motion to reopen, respectively. Any motion must be filed on a Notice of Appeal or Motion (Form I-290B) within 33 days of the date of this decision. **Please review the Form I-290B instructions at <http://www.uscis.gov/forms> for the latest information on fee, filing location, and other requirements. See also 8 C.F.R. § 103.5. Do not file a motion directly with the AAO.**

Thank you,

A handwritten signature in black ink, appearing to read "Ron Rosenberg".

Ron Rosenberg

Chief, Administrative Appeals Office

DISCUSSION: The Director, Texas Service Center, denied the immigrant visa petition and the matter is now before the Administrative Appeals Office (AAO) on appeal. We will dismiss the appeal.

The petitioner, a mechanical engineer, seeks classification as an employment-based immigrant pursuant to section 203(b)(1)(A) of the Immigration and Nationality Act (the Act), 8 U.S.C. § 1153(b)(1)(A), as an alien of extraordinary ability in the sciences.¹ The director determined that the petitioner had not met the requisite criteria for classification as an alien of extraordinary ability.

Congress set a very high benchmark for aliens of extraordinary ability by requiring through the statute that the petitioner demonstrate the alien's "sustained national or international acclaim" and present "extensive documentation" of the alien's achievements. See section 203(b)(1)(A)(i) of the Act and 8 C.F.R. § 204.5(h)(3). The implementing regulation at 8 C.F.R. § 204.5(h)(3) states that an alien can establish sustained national or international acclaim through evidence of a one-time achievement of a major, internationally recognized award. Absent the receipt of such an award, the regulation outlines ten categories of specific objective evidence. 8 C.F.R. § 204.5(h)(3)(i) through (x). The petitioner must submit qualifying evidence under at least three of the ten regulatory categories of evidence to establish the basic eligibility requirements. The director determined that the petitioner's evidence had met the categories of evidence at 8 C.F.R. § 204.5(h)(3)(iv) and (vi).

On appeal, the petitioner submits a brief and additional evidence. In the brief, the petitioner asserts that he also meets the categories of evidence at 8 C.F.R. § 204.5(h)(3)(v) and (viii).

I. LAW

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

(1) Priority workers. -- Visas shall first be made available . . . to qualified immigrants who are aliens described in any of the following subparagraphs (A) through (C):

(A) Aliens with extraordinary ability. -- An alien is described in this subparagraph if --

(i) the alien has extraordinary ability in the sciences, arts, education, business, or athletics which has been demonstrated by sustained national or international acclaim and whose achievements have been recognized in the field through extensive documentation,

(ii) the alien seeks to enter the United States to continue work in the area of extraordinary ability, and

¹ According to Form I-94, Arrival-Departure Record, the petitioner was last admitted to the United States on August 21, 2009 as an F-1 nonimmigrant student.

(iii) the alien's entry into the United States will substantially benefit prospectively the United States.

U.S. Citizenship and Immigration Services (USCIS) and legacy Immigration and Naturalization Service (INS) have consistently recognized that Congress intended to set a very high standard for individuals seeking immigrant visas as aliens of extraordinary ability. See H.R. 723 101st Cong., 2d Sess. 59 (1990); 56 Fed. Reg. 60897, 60898-99 (Nov. 29, 1991). The term "extraordinary ability" refers only to those individuals in that small percentage who have risen to the very top of the field of endeavor. *Id.*; 8 C.F.R. § 204.5(h)(2).

The regulation at 8 C.F.R. § 204.5(h)(3) requires that the petitioner demonstrate the alien's sustained acclaim and the recognition of his or her achievements in the field. Such acclaim must be established either through evidence of a one-time achievement (that is, a major, international recognized award) or through the submission of qualifying evidence under at least three of the ten categories of evidence listed at 8 C.F.R. § 204.5(h)(3)(i)-(x).

In 2010, the U.S. Court of Appeals for the Ninth Circuit (Ninth Circuit) reviewed the denial of a petition filed under this classification. *Kazarian v. USCIS*, 596 F.3d 1115 (9th Cir. 2010). Although the court upheld our decision to deny the petition, the court took issue with our evaluation of evidence submitted to meet a given evidentiary criterion.² With respect to the criteria at 8 C.F.R. § 204.5(h)(3)(iv) and (vi), the court concluded that while USCIS may have raised legitimate concerns about the significance of the evidence submitted to meet those two criteria, those concerns should have been raised in a subsequent "final merits determination." *Id.* at 1121-22.

The court stated that our evaluation rested on an improper understanding of the regulations. Instead of parsing the significance of evidence as part of the initial inquiry, the court stated that "the proper procedure is to count the types of evidence provided (which we did)," and if the petitioner failed to submit sufficient evidence, "the proper conclusion is that the applicant has failed to satisfy the regulatory requirement of three types of evidence (as we concluded)." *Id.* at 1122 (citing to 8 C.F.R. § 204.5(h)(3)).

Thus, *Kazarian* sets forth a two-part approach where the evidence is first counted and then considered in the context of a final merits determination. In this matter, we will review the evidence under the plain language requirements of each criterion claimed. As the petitioner did not submit qualifying evidence under at least three criteria, the proper conclusion is that the petitioner has failed to satisfy the regulatory requirement of three types of evidence. *Id.*

II. ANALYSIS

A. Evidentiary Criteria

² Specifically, the court stated that we had unilaterally imposed novel substantive or evidentiary requirements beyond those set forth in the regulations at 8 C.F.R. § 204.5(h)(3)(iv) and 8 C.F.R. § 204.5(h)(3)(vi).

The Form I-140, Immigrant Petition for Alien Worker, was filed on January 23, 2014. The petitioner submitted a January 13, 2014 letter from Dr. [REDACTED] Quina Professor and Department Chair of Mechanical Engineering, [REDACTED], stating:

[The petitioner] is currently enrolled as a Ph.D. student in the Department of Mechanical Engineering at [REDACTED]. As a good-standing Ph.D. student since August 2009, he has been working as a research assistant until Dec. 31, 2013, and he is currently continuing research in a curricular practical training (CPT) program in the field of energy efficiency and fuel economy engineering.

On September 30, 2014, the petitioner submitted a copy of his Ph.D. degree from [REDACTED] that he received on August 2, 2014. The petitioner, however, received his Ph.D. subsequent to filing the Form I-140 petition. Eligibility must be established at the time of filing. 8 C.F.R. § 103.2(b)(1), (12); *Matter of Katigbak*, 14 I&N Dec. 45, 49 (Reg'l Comm'r 1971). Accordingly, we cannot consider the petitioner's Ph.D. degree as evidence to establish his eligibility at the time of filing.

The petitioner has submitted documentation pertaining to the following categories of evidence under 8 C.F.R. § 204.5(h)(3).³

Documentation of the alien's receipt of lesser nationally or internationally recognized prizes or awards for excellence in the field of endeavor.

The director discussed the evidence submitted for this regulatory criterion and found that the petitioner failed to establish his eligibility. On appeal, the petitioner does not contest the director's findings for this criterion or offer additional arguments. When an appellant fails to offer argument on an issue, that issue is abandoned. *Sepulveda v. U.S. Att'y Gen.*, 401 F.3d 1226, 1228 n. 2 (11th Cir. 2005); *Hristov v. Roark*, No. 09-CV-27312011, 2011 WL 4711885 at *1, *9 (E.D.N.Y. Sept. 2011) (plaintiff's claims abandoned when not raised on appeal). Accordingly, the petitioner has not established that he meets this regulatory criterion.

Documentation of the alien's membership in associations in the field for which classification is sought, which require outstanding achievements of their members, as judged by recognized national or international experts in their disciplines or fields.

The director discussed the evidence submitted for this criterion and found that the petitioner failed to establish his eligibility. On appeal, the petitioner does not contest the director's findings for this criterion or offer additional arguments. The issue, therefore, is considered abandoned. *Sepulveda*, 401 F.3d at 1228 n.2; *Hristov*, 2011 WL 4711885, at *9. Accordingly, the petitioner has not established that he meets this regulatory criterion.

³ On appeal, the petitioner does not claim to meet any of the regulatory categories of evidence not discussed in this decision. Therefore, no determination has been made regarding whether the petitioner meets the remaining categories of evidence.

Evidence of the alien's participation, either individually or on a panel, as a judge of the work of others in the same or an allied field of specification for which classification is sought.

The petitioner submitted evidence demonstrating that he peer-reviewed manuscripts for [REDACTED]

[REDACTED] Accordingly, the director's finding that the petitioner's evidence meets this regulatory criterion is affirmed.

Evidence of the alien's original scientific, scholarly, artistic, athletic, or business-related contributions of major significance in the field.

The petitioner submitted letters of support, his publications and presentations, technical reports, websites where his articles are accessible, and citation evidence for his published work. The director acknowledged the petitioner's submission of the preceding evidence, but found that it was not sufficient to demonstrate that the petitioner's work equated to original contributions of major significance in the field. The director therefore concluded that the petitioner did not establish eligibility for this regulatory criterion.

The plain language of this criterion requires "[e]vidence of the alien's original scientific, scholarly, artistic, athletic, or business-related contributions of major significance in the field." Here, the evidence must be reviewed to see whether it rises to the level of original scientific or scholarly-related contributions "of major significance in the field." The phrase "major significance" is not superfluous and, thus, it has some meaning. *Silverman v. Eastrich Multiple Investor Fund, L.P.*, 51 F. 3d 28, 31 (3rd Cir. 1995) *quoted in APWU v. Potter*, 343 F.3d 619, 626 (2nd Cir. Sep 15, 2003).

Initially, the petitioner submitted copies of six articles that cited to his work. On appeal, the petitioner submits citation evidence from [REDACTED] reflecting an aggregate of thirteen cites to his body of research work since 2009. Numerous favorable independent citations for an article authored by the petitioner may indicate that other researchers have been influenced by his work and are familiar with it. A scant citation record, on the other hand, may indicate that the petitioner's findings have gone largely unnoticed by others in his field. The submitted documentation reflects that none of the petitioner's individual articles was cited to more than five times. Specifically:

- 1.
- 2.
- 3.
- 4.
- 5.

[REDACTED]

6. [REDACTED]

With regard to items 1 – 6, the petitioner has not established that the number of independent cites per article for his published work is indicative of original scientific contributions of “major significance” in the field. On September 30, 2014, the petitioner submitted updated citation evidence from [REDACTED] reflecting an aggregate of nineteen cites to his body of research work from January [REDACTED] to September [REDACTED]. The six additional citations, however, post-date filing of the Form I-140 petition on January 23, 2014. Again, eligibility must be established at the time of filing. 8 C.F.R. § 103.2(b)(1), (12); *Matter of Katigbak*, 14 I&N Dec. a 49. Accordingly, we cannot consider the newer citations as evidence to establish the petitioner’s eligibility at the time of filing. Regardless, the number of additional citations is not sufficient to demonstrate that the petitioner’s published findings were of major significance to the field.

In addition to the [REDACTED] citation evidence, the petitioner submits information about [REDACTED] from the publisher [REDACTED] website. The petitioner also submits an “Article Usage Dashboard” from [REDACTED] for [REDACTED] showing that the article had “572 total views” since its publication in July [REDACTED]. The petitioner has not established that such a level of readership is indicative of a contribution of major significance in the field. The regulations contain a separate criterion regarding authorship of scholarly articles in professional publications. 8 C.F.R. § 204.5(h)(3)(vi). In *Kazarian v. USCIS*, 580 F.3d 1030, 1036 (9th Cir. 2009), the court held that publications and presentations are not sufficient evidence under 8 C.F.R. § 204.5(h)(3)(v) absent evidence that they were of “major significance” in the field. In 2010, the *Kazarian* court reaffirmed its holding that the AAO did not abuse its discretion in finding that the alien had not demonstrated contributions of major significance. 596 F.3d at 1122. Again, there is no presumption that every published article or conference presentation is a contribution of major significance; rather, the petitioner must document the actual impact of his article or presentation. The submitted information about the journals that published the petitioner’s work and the number of views of his articles is not sufficient to demonstrate that his findings were of major significance in the field.

The petitioner also submitted information showing the impact factor of the journals that published his work. Although a journal’s impact factor can provide an approximation of the prestige of the journal, the impact factor does not demonstrate the major significance of every article published in that journal. In addition, the petitioner submitted printouts from various websites that include abstracts of the petitioner’s publications. While having his abstracts posted on these websites shows that information about the petitioner’s published work was available online, he must still establish that his findings have affected the mechanical engineering field at a level indicative of original contributions of major significance in the field. Again, the petitioner has not demonstrated that the number of independent cites to his published findings are indicative of contributions of major significance in the mechanical engineering field.

The petitioner’s appeal brief points to the letters of support as further evidence that he meets this criterion.

Dr. [REDACTED] Professor, Department of Computer and Industrial Engineering, [REDACTED] states:

[The petitioner's] achievements and ongoing work are of key importance in development and utilization of thermal energy storage systems and will make it possible for U.S. to remain competitive in this highly-specialized competitive field.

[The petitioner's] groundbreaking work, recently published in the [REDACTED] ranked in the top 5% of all journals worldwide in the field of fluid flow and transfer processes), addressed the [REDACTED]. . . [The petitioner's] technically brilliant and scientifically innovative work elucidated the mechanism of [REDACTED] using a novel multiphase approach exhibiting an exceptionally sound methodology, unusually detailed computational predictions and a particularly strong validation of computational predictions using experimental methods. His comprehensive work has great importance to the development of thermal energy storage by addressing [REDACTED] as one of the challenging issues in such systems.

In another highly novel and critically important contribution to the field, [the petitioner] conducted cutting-edge research on thermal conductivity improvement of phase change materials/graphite foam composites, which successfully addressed another key factor in employing thermal energy storage composites. High level of thermal conductivity improvement is highly important for development of thermal energy storage systems with faster response. Not only does thermal conductivity improvement enable such systems to operate in shorter periods of energy charge and discharge, but also makes it possible to achieve higher rates of energy exchange. In these ways, [the petitioner's] achievements and ongoing research opens a wide range of opportunities for developing thermal energy storage application in various industries, such as waste heat recovery (e.g. from boilers, furnaces and power plants), manufacturing new class of building materials with energy storage capability and thermal management applications. His work incontestably provides a positive impact on the national economy through providing job opportunities in the field of design and manufacture of advanced energy storage materials and applications, as well as a positive impact on energy efficiency which reduces the energy consumption and energy bills for residential and industrial consumers, and therefore, is in national interest of the U.S.

[The petitioner] has made key contributions to the study of thermal energy storage systems in the context of development and utilization of these systems.

Dr. [REDACTED] mentions the petitioner's research on void formation in the [REDACTED]

[REDACTED] As previously noted, the former article was cited to once and the latter article was cited to five times. The petitioner has not established that this level of citation is indicative of contributions of major significance in the field. In addition, while Dr. [REDACTED] comments on the general importance of the petitioner's work on thermal energy storage systems and future opportunities that may arise from his ongoing research, Dr. [REDACTED] does not provide specific examples of how the petitioner's findings have already been utilized "for developing thermal energy storage application in

various industries” or otherwise constitute contributions of major significance in the field. Dr. [REDACTED] speculation about possible future national economic benefits associated with the petitioner’s work (such as job opportunities and reduced energy bills for residences and businesses in the United States) is not evidence, and cannot establish eligibility for this regulatory criterion. Eligibility must be established at the time of filing. 8 C.F.R. § 103.2(b)(1), (12); *Matter of Katigbak*, 14 I&N Dec. at 49.

Dr. [REDACTED] Associate Professor of Mechanical Engineering Technology, [REDACTED] states:

Among his innovative and highly significant achievements, [the petitioner] devised a brilliant computational simulation of development process for thermal energy storage systems. He creatively adopted a multiphase model and selected a pore-level analysis to explain the development process in unprecedented detail. His method is a breakthrough in understanding the details and clarifying multiple physical phenomena that can occur during the development process of thermal energy storage composites. . . . He conducted an extraordinary investigation of various scenarios for the development process, with the aid of the innovative method he developed with its rare capability to show the effects of various parameters involved in this process. As a result, he published his findings in the [REDACTED] the leading journal in the field of [REDACTED]. His published research is highly original (the subject of his research was one of the challenges in the development of thermal energy storage systems), innovative (using a multiphase approach), creative (developing a pore-level model to conduct supercomputing in optimum levels) and comprehensive (investigating and reporting several possible scenarios of the process). In an additional contribution of great practical importance and value in development of thermal energy storage systems, a creative and innovative experiment was designed by [the petitioner] to validate the computational predictions. This is a great step in validating the novel computational results and showing their agreement and accordance with actual thermal energy storage composites. . . . He presented the details of his experimental effort in another conference [REDACTED] . . .

Dr. [REDACTED] comments that the petitioner devised a multiphase model for computational simulation of the development process for thermal energy storage systems, but does not provide specific examples of how the petitioner’s method has been utilized or licensed by various thermal energy storage systems manufacturers, or otherwise equates to a scientific contribution of major significance in the field. In addition, Dr. [REDACTED] states that the petitioner published his research in [REDACTED] and validated his computational predictions in findings presented at the [REDACTED] but there is no documentary evidence showing that the petitioner’s work was frequently cited by independent researchers or has otherwise risen to the level of contributions of major significance in the field.

In addition, Dr. [REDACTED] states:

In another novel and highly significant research accomplishment, [the petitioner] simulated the phase change processes in thermal energy storage composites using a multiphase approach. . . . Exploiting his exceptional supercomputing skills, he successfully demonstrated

the effect of voids (predicted during the development process) on the thermal behavior of thermal energy storage composites during their life-time usage. Due to his comprehensive multiphase approach and innovative adopted model, he creatively added an appropriate phase change method to his model, enabling him to simulate freezing and melting processes in thermal energy storage systems. In this way, he became one of the first scientists worldwide to successfully clarify the interactions between voids (air bubbles) and phase change materials during the utilization of thermal energy storage composites. . . . His research has attracted the attention of researchers worldwide in industry and academia. This is because [the petitioner's] contributions (prediction of void formation, demonstration of the effect of voids, clarifying the interactions between voids and phase change materials and predicting the volume change during the phase change) are critical and highly technical issues in development and employment of thermal energy storage systems. Design and development of thermal energy storage systems for various applications are crucial to improve energy efficiency, reduce fuel consumption (with public benefit to U.S. by reducing energy bills), employ renewable energy and reduce air pollution (with public benefit to U.S. through positive impacts on environment/health). Such bold contributions and achievements in the field of thermal energy storage put [the petitioner] in a higher position compared to his peers.

Dr. [REDACTED] mentions that the petitioner [REDACTED] thermal behavior of thermal energy storage composites during their life-time usage” and that “he became one of the first scientists worldwide to successfully clarify the interactions between [REDACTED] [REDACTED] during the utilization of thermal energy storage [REDACTED]. In addition, Dr. [REDACTED] asserts that the petitioner “attracted the attention of researchers worldwide in industry and academia,” but the limited citation evidence the petitioner submitted does not support the assertion. USCIS need not rely on unsubstantiated claims. *See 1756, Inc. v. U.S. Att’y Gen.*, 745 F. Supp. 9, 15 (D.D.C. 1990) (holding that an agency need not credit conclusory assertions in immigration benefits adjudications); *see also Visinscaia*, 2013 WL 6571822, at *4, *6 (upholding USCIS’ decision to give limited weight to uncorroborated assertions from practitioners in the field).

Furthermore, while Dr. [REDACTED] comments on the importance of the petitioner’s work in resolving “highly technical issues in development and employment of thermal energy storage systems,” he does not provide specific examples of thermal energy storage systems utilizing the petitioner’s model that have already produced significant public benefits to the United States through nationwide reductions in fuel consumption and air pollution levels, or that were otherwise majorly significant to the field. Although the petitioner’s research findings have value, any research must be original and likely to present some benefit if it is to receive funding and attention from the scientific or academic community. In order for a university, publisher or grantor to accept any research for graduation, publication or funding, the research must offer new and useful information to the pool of knowledge. Not every mechanical engineering student who performs original graduate research that adds to the general pool of knowledge in the field has inherently made a contribution of “major significance” to the field as a whole. The petitioner has not established that his work has affected the thermal energy industry or the engineering research community in a major way, or that his work was otherwise indicative of original contributions of major significance in the field.

Dr. [REDACTED] Associate Professor of Chemical Engineering, [REDACTED] states:

[The petitioner's] first outstanding contribution was energy efficiency improvement and fuel saving in natural gas water heaters. . . . His approach was sound and comprehensive and reflected his extraordinary skills in modeling and analysis of residential water heaters, Computer-Aided Design and engineering (CAD/CAE) for making improvements. His research was continued with prototyping and testing the modified water heaters to validate the research outcome. He successfully achieved a significant improvement in fuel economy in residential water heaters that also corresponds to a reduction in emissions. His scientific success produced economic and environmental benefits of nationwide application to the public through fuel savings and emission reduction.

Dr. [REDACTED] comments on the petitioner's work as part of an [REDACTED] (\$95,000) from the [REDACTED] aimed at lowering the energy consumption of natural gas water heaters. Although the petitioner and his supervisor, Dr. [REDACTED] developed prototype water heaters with various baffle designs as part of the project, there is no evidence showing that any of their prototypes were utilized by natural gas water heater manufacturers, were adopted as an industry standard as required by the [REDACTED] or were otherwise indicative of original contributions of major significance in the field.

Dr. [REDACTED] further states:

[The petitioner] made advances in clarifying the role of undesirable [REDACTED] (known as [REDACTED]) thermal energy storage composites. He devised a novel multiphase model to study the behavior of these materials during their development. . . . In a remarkable accomplishment that reflects scientific innovation, he successfully identified and reported the mechanisms responsible for [REDACTED]. Furthermore, he extended his novel approach to investigate the effect of such [REDACTED] on cyclic thermal behavior of thermal energy storage materials (freezing and melting) and elucidated the interactions between [REDACTED] of phase change materials during freezing and melting (i.e. contraction and expansion of liquids during freezing and melting). In these ways, [the petitioner] successfully addressed daunting challenges in development and usage of thermal energy storage materials for the first time. Development of these materials is of key importance in achieving energy efficiency improvement and in employing renewable energy sources in several applications, with obvious benefits to the United States.

Dr. [REDACTED] comments that the petitioner "successfully identified and reported the mechanisms responsible for formation of [REDACTED] and that he "elucidated the interactions between [REDACTED] during [REDACTED]" The petitioner, however, did not submit documentary evidence showing that the petitioner's specific findings have been utilized by others in the development and usage of thermal energy storage materials, that his work has influenced mechanical engineering practices, or that his findings otherwise equate to original contributions of major significance in the field.

In addition, Dr. [REDACTED] states:

In yet another key contribution to the field of thermal energy storage, [the petitioner] investigated the effective thermal conductivity improvement of thermal energy storage composites. Effective thermal conductivity is a key factor in design of these composites. The challenge in development of thermal energy storage composites is that thermal conductivities of phase change materials are very low, while the effective thermal conductivity is required to be high enough to make the resulting composite functional for certain applications. [The petitioner] successfully investigated the effective thermal conductivity in composites of phase change materials and graphite foam (a new form of graphite with a porous structure and high thermal conductivity) and achieved a remarkable improvement.

Dr. [REDACTED] asserts that the petitioner “successfully investigated the effective thermal conductivity in composites of phase change materials and graphite foam . . . and achieved a remarkable improvement,” but USCIS need not accept primarily conclusory assertions. *See 1756, Inc. v. U.S. Att’y Gen.*, 745 F. Supp. at 15. As the submitted evidence shows that the petitioner’s article “Thermal conductivity improvement of phase change materials/graphite foam composites” has been cited to only five times, Dr. [REDACTED] comments are not sufficient to demonstrate that the petitioner’s work was of major significance to the field.

Dr. [REDACTED] Head of the Heat Transfer Laboratory, Department of Mechanical Engineering, [REDACTED] states:

I would like to stress that [the petitioner’s] works have already made a significant contribution to different aspects of this field. . . . I attended a presentation he made in 2012 at the [REDACTED] addressing the effect of voids on freezing of phase change materials infiltrated in thermal energy storage composites.... Using a novel multiphase approach, [the petitioner] was able to predict formation of voids, i.e. undesirable air bubbles, that may form in the material and present a key challenge in the field because their existence negatively affects the energy storage capacity and thermal behavior. [The petitioner’s] innovative, detailed computational investigation elucidated the effect of various parameters with regard to formation of voids. Moreover, he successfully validated the obtained results and predictions using a highly creative original experiment.

Dr. [REDACTED] comments on the petitioner’s presentation at the [REDACTED] but there is no evidence showing that the petitioner’s findings about the [REDACTED] were frequently cited by independent researchers or otherwise equate to original contributions of major significance in the field. With regard to the petitioner’s conference presentations, many professional fields regularly hold meetings and conferences to present new work, discuss new findings, and to network with other professionals. Professional associations, educational institutions, employers, and government agencies promote and sponsor these meetings and conferences. Participation in such events, however, does not equate to original contributions of major significance in the field. There is no documentary evidence showing that the petitioner’s presented work has affected the mechanical engineering field as a whole or has otherwise risen to the level of contributions of major significance in the field.

Dr. [REDACTED] continues:

In yet another highly significant and original contribution, [the petitioner] conducted a thorough computational and experimental investigation on thermal conductivity improvement of phase change materials/graphite foam composites. It should be stressed that the low thermal conductivity of pure phase change materials is the major obstacle in development of thermal energy storage systems for such applications. As demonstrated through [the petitioner's] research, the effective thermal conductivity of thermal energy storage composites can be improved significantly compared to the thermal conductivity of pure phase change materials.

Thermal energy storage is a crucial gateway to achieve energy efficiency enhancement and eventually make the energy use sustainable. The vast number of thermal energy storage applications . . . makes thermal energy storage even more important in energy/environment management, which is essential for dealing with international energy crises and improving the environment as significant development factors for industrial nations. In this connection, it may be observed that [the petitioner's] outstanding research accomplishments may directly help the U.S. in responding to energy challenges and in remaining highly competitive in the energy field.

Dr. [REDACTED] mentions the petitioner's work on thermal conductivity improvement of [REDACTED] but fails to provide specific examples of how the petitioner's findings have already affected practices in the energy industry or were otherwise of major significance in the field.

Dr. [REDACTED] Associate Professor, Department of Mechanical Engineering, [REDACTED], states:

[The petitioner] has major contributions to the field of thermal energy storage due to his productive investigations of thermal energy storage composites (TESC). Specifically, he has conducted investigations into the formation of voids, the influence of voids on thermal behavior, and the effective thermal conductivity of TESC systems. In performing this work, [the petitioner] devised an innovative approach based on multiphase method, a method capable of considering the physical behavior of air (as a gas) in combination with phase change materials (as liquid and solid) in thermal energy storage systems.

Dr. [REDACTED] comments on the petitioner's investigations of TESC systems and his development of a multiphase method capable of considering the physical behavior of air in combination with phase change materials. There is no documentary evidence showing, however, that the petitioner's work has been frequently cited by independent researchers, that his method for assessing TESC systems is being widely utilized by other engineers, or that his findings were otherwise of major significance to the field.

In his December 19, 2013 letter, Dr. [REDACTED] Alumni Chair Professor, Department of Mechanical Engineering, [REDACTED] states:

[The petitioner] had a critical role in a major project entitled [REDACTED] which was funded by the [REDACTED] to improve the energy efficiency of residential natural gas water heaters. [The petitioner] successfully completed key components of this project and achieved an astonishing result of about 5% efficiency improvement in residential water heaters through development, adoption and testing of a novel design of a baffle. Based on the annual data on 2010 U.S. household natural gas consumption for water heating, such a design is evaluated to be able to save 420 million dollars per year to the residential consumers of California, as published in the technical report of this project (section of “public benefits to California” on page 38). It is also estimated that this design will have a yearly benefit of 914 million dollars to the residential customers nationwide based on the residential natural gas consumption data of [REDACTED].

The petitioner submitted a copy of the technical report for the [REDACTED] that he and Dr. [REDACTED] authored entitled [REDACTED]. While page 38 of their report provides an estimation of the potential energy savings resulting from their proposed technology, there is no indication that any of these benefits have yet been realized. Again, speculation about possible future state and national economic benefits is not evidence, and cannot establish eligibility for this regulatory criterion. Eligibility must be established at the time of filing. 8 C.F.R. § 103.2(b)(1), (12); *Matter of Katigbak*, 14 I&N Dec. at 49. In his letter, Dr. [REDACTED] does not provide specific examples of how their novel baffle design for hot water heaters has been successfully utilized by any product manufacturers or otherwise constitutes an original contribution of major significance in the field.

Dr. [REDACTED] continues:

[The petitioner] conducted a key investigation of the effective thermal conductivity of thermal energy composites as a challenging parameter in design and development of these composites. . . . [The petitioner] developed a complicated three-dimensional model for thermal energy storage composites of phase change materials and graphite foam. [The petitioner] conducted comprehensive computational and experimental investigations in this field and elucidated the effective thermal conductivity of thermal energy storage composites. His contribution is a great step toward the design and implementation of such composites in many applications from thermal management of households and buildings to industrial, military and space applications. . . . [The petitioner’s] approach was truly novel, impeccable and thorough (including computational predictions, experimental results and validation) and he published his research outcomes in the journal of [REDACTED] one of the most selective and most reputable scientific journals in this field.

Dr. [REDACTED] points out that the petitioner developed a three-dimensional model for thermal energy storage composites of phase change materials and graphite foam, but does not provide specific examples of how the petitioner’s model has been applied by others outside of [REDACTED] or otherwise equates to a contribution of major significance in the field. The plain language of the

regulation at 8 C.F.R. § 204.5(h)(3)(v) requires that the petitioner's contributions be "of major significance in the field" rather than limited to his university or research institution. *See Visinscaia v. Beers*, --- F. Supp. 2d ---, 2013 WL 6571822, at *6 (D.D.C. Dec. 2013) (upholding a finding that a ballroom dancer had not met this criterion because she did not demonstrate her impact in the field as a whole). In addition, the [REDACTED] citation evidence shows that the petitioner and Dr. [REDACTED] article in [REDACTED] has been cited to only five times. The petitioner has not demonstrated that such a minimal level of citation is indicative of contributions of major significance to the field.

Dr. [REDACTED] Lead Engineer, [REDACTED] states:

[The petitioner's] remarkable research published in [REDACTED] is used for day-to-day analysis of the [REDACTED] as a critical aspect in design of thermal energy storage systems. [The petitioner's] numerical and experimental effort enhanced our understanding of thermal energy storage composites, and has been a useful design/analysis tool for all researchers involved in design and development of such systems.

Dr. [REDACTED] asserts that the petitioner's research published in [REDACTED] "is used for day-to-day analysis of the effective thermal conductivity as a critical aspect in design of thermal energy storage systems" and "has been a useful design/analysis tool for all researchers involved in design and development of such systems," but does not provide specific examples of how his company is utilizing the petitioner's analytical tool, or to identify any other companies that have implemented the petitioner's methodology.

The petitioner submitted letters of varying probative value. We have addressed the specific assertions above. Generalized conclusory assertions that do not identify specific contributions or their impact in the field have little probative value. *See 1756, Inc. v. U.S. Att'y Gen.*, 745 F. Supp. at 17. In addition, uncorroborated assertions are insufficient. *See Visinscaia*, 2013 WL 6571822, at *6 (upholding USCIS' decision to give limited weight to uncorroborated assertions from practitioners in the field); *Matter of Caron Int'l, Inc.*, 19 I&N Dec. 791, 795 (Comm'r 1988) (holding that an agency "may, in its discretion, use as advisory opinions statements . . . submitted in evidence as expert testimony," but is ultimately responsible for making the final determination regarding an alien's eligibility for the benefit sought and "is not required to accept or may give less weight" to evidence that is "in any way questionable"). The submission of reference letters supporting the petition is not presumptive evidence of eligibility; USCIS may evaluate the content of those letters as to whether they support the petitioner's eligibility. *Id. See also Matter of V-K-*, 24 I&N Dec. 500, n.2 (BIA 2008) (noting that expert opinion testimony does not purport to be evidence as to "fact"). Without additional, specific evidence showing that the petitioner's original work has been unusually influential, widely implemented throughout his field, or has otherwise risen to the level of contributions of major significance, the petitioner has not established that he meets this regulatory criterion.

Evidence of the alien's authorship of scholarly articles in the field, in professional or major trade publications or other major media.

The petitioner has documented his authorship of scholarly articles in professional publications and, thus, has submitted qualifying evidence pursuant to 8 C.F.R. § 204.5(h)(3)(vi). Accordingly, the director's finding that the petitioner's evidence meets this regulatory criterion is affirmed.

Evidence that the alien has performed in a leading or critical role for organizations or establishments that have a distinguished reputation.

The director discussed the evidence submitted for this criterion and found that the petitioner failed to establish his eligibility. On appeal, the petitioner asserts that his "role has been critical in his work sponsored by the [redacted] as distinguished agencies in the field of energy." The petitioner points to letters of support that discuss his graduate work at [redacted] on research projects sponsored by the [redacted] and the [redacted] as evidence that he meets this criterion. While the petitioner worked on projects that received funding from the [redacted], there no documentary evidence demonstrating that his role for two those agencies was leading or critical.

Dr. [redacted] states:

Since 2009, I have been familiar with outstanding research and contributions of [the petitioner] in two demanding projects funded by the [redacted]. [The petitioner] had key roles in both of these projects, and his work demonstrated an exceptional level of expertise in his field These are key contributions to the field of thermal energy storage that [the petitioner] achieved by identifying the essential governing factors in complicated systems using his outstanding skills and innovative approaches. He obtained extraordinary results during his research due to his rare skills in computational as well as experimental fluid dynamics and heat transfer, and his scientifically creative approaches and outcomes. His technically brilliant and innovative contributions clearly distinguish him from the vast majority of his peers with comparable basic professional credentials in the field.

Although the petitioner may have performed well on the [redacted] research projects to which he was assigned as Dr. [redacted] research assistant, there is no documentary evidence showing that he performed in a leading or critical role for the [redacted]. For instance, unlike Dr. [redacted] there is no evidence demonstrating that the petitioner has often served as a principal investigator and initiated research projects of his own.

Dr. [redacted] states:

[The petitioner's] rare combination of top-level expertise both in computational and experimental heat transfer and in fluid dynamics, combined with a talent for applying scientific creativity to achieve practical results, clearly distinguishes [the petitioner] from his peers with comparable basic professional credentials.

[The petitioner] is a researcher and an engineer of unique skills, whose contributions to the applied science of thermal energy storage systems have directly led to significant

achievements and improvements in technology development. In all of his studies, [the petitioner] has been an exceptionally innovative and productive researcher and has made important original contributions to technologies which are crucial to the national economic growth. [The petitioner's] research consistently has displayed a rare level of innovation, scientific creativity and originality that is of immeasurable importance.

Dr. [redacted] comments on the petitioner's expertise and research skills, but does not explain how the petitioner's temporary role as a graduate research assistant was leading or critical to [redacted]

Dr. [redacted] states:

[The petitioner] became one of the first scientists worldwide to successfully clarify the interactions between voids (air bubbles) and phase change materials during the utilization of thermal energy storage composites. Moreover, he obtained impressive results in terms of predicting the volume change of these materials (volume contraction and expansion due to freezing and melting) within thermal energy storage systems. . . . His research has attracted the attention of researchers worldwide in industry and academia. This is because [the petitioner's] contributions (prediction of void formation, demonstration of the effect of voids, clarifying the interactions between voids and phase change materials and predicting the volume change during the phase change) are critical and highly technical issues in development and employment of thermal energy storage systems. Design and development of thermal energy storage systems for various applications are crucial to improve energy efficiency, reduce fuel consumption (with public benefit to U.S. by reducing energy bills), employ renewable energy and reduce air pollution (with public benefit to U.S. through positive impacts on environment/health). Such bold contributions and achievements in the field of thermal energy storage put [the petitioner] in a higher position compared to his peers.

Dr. [redacted] mentions the petitioner's research findings and their potential benefits, but does not comment on how the petitioner's research assistant position was leading or critical to [redacted]

Dr. [redacted] states:

Having significant contributions in this field requires exceptional levels of expertise, computational and experimental skills as well as technical brilliance, innovation and creativity. [The petitioner's] research demonstrates such elements to a great extent, reflects his skills and abilities and distinguishes him from his peers.

* * *

By addressing problems that are among the most challenging in his field, [the petitioner] published 16 highly-technical research papers (including 6 journal paper and 10 conference paper) in the competitive field of energy. Such achievement clearly demonstrates his extensive skills and remarkable vision, which differentiates him from his peers.

* * *

[The petitioner] has been honored with outstanding awards at . . . two international conferences in recognition of the outstanding quality of his research. The outstanding paper awards in international conferences are very selective with a few recipients among a large number of applicants in international level in addition to major contributions, such awards require high levels of quality and innovation in research and significant outcomes which makes the nomination and selection processes very competitive. [The petitioner] has awards in such level which is exceptional and distinguishes him from his peers.

Dr. [redacted] points to the petitioner's research expertise, computational and experimental skills, authorship of multiple research papers, and two outstanding paper awards from engineering conferences in which the petitioner participated. The regulations, however, include separate criteria for awards and authorship of scholarly articles at 8 C.F.R. § 204.5(h)(3)(i) and (vi), respectively. Evidence relating to or even meeting those two criteria is not presumptive evidence that the petitioner also meets this regulatory criterion. The regulatory criteria are separate and distinct from one another. Because separate criteria exist for awards, authorship of scholarly articles, and performing in a leading or critical role for distinguished organizations, USCIS clearly does not view them as being interchangeable. To hold otherwise would render meaningless the statutory requirement for extensive evidence or the regulatory requirement that a petitioner meet at least three separate criteria. Regardless, Dr. [redacted] comments fail to demonstrate that the petitioner's role as Ph.D. student and research assistant was leading or critical role for [redacted]

Dr. [redacted] Program Manager [redacted] states:

This is to attest to the quality of research output and quality of the research conducted under a grant for which I am the project monitor. . . . The grant is entitled, [redacted]

* * *

[The petitioner], a Ph.D. student supported under this award as a graduate research assistant, has contributed quite significantly to the quality of this research effort including aspects of both the experimental and mathematical modeling of heat transfer and fluid flow. . . . His research has involved collaborations across academic departments and with other academic institutions. He has been a major factor in the research output of this award. This is an impressive contribution to the research literature from a Ph.D. student during the course of his doctoral studies.

Dr. [redacted] points to the quality of the petitioner's work on a [redacted] grant entitled [redacted] but his comments fail to demonstrate that the petitioner's role as a Ph.D. student was leading or critical to the [redacted]

In his December 19, 2013 letter, Dr. [redacted] states:

[redacted] has had a significant impact in developing numerical solutions and predicting the behavior of different phenomena for design and development purposes in many industries. . . . [The petitioner] has developed complex realistic models that greatly improve the quality of design and development processes and reduce the associated time and costs. His novel approach is of key importance for improving working and economic conditions of industries in the U.S. through reducing the costs and time of development as well as the number of prototypes and experiments needed for product development. Such an advanced level of expertise in the whole process of product development including computer-aided design, analysis, optimization and engineering clearly makes [the petitioner] to stand out at the highest level among his peers.

* * *

[The petitioner] had a critical role in a major project entitled “energy efficiency improvement and fuel saving in water heaters using baffles,” which was funded by the [redacted] to improve the energy efficiency of residential natural gas water heaters.

* * *

Based on the success of the [redacted] project, and in recognition of his outstanding expertise and achievements, the [redacted] group selected [the petitioner] to join as a researcher. Since joining the [redacted] group, he has played a key role in a multidisciplinary project on ‘[redacted]’ at [redacted] that is funded by the [redacted] for the purpose of thermal energy storage.

* * *

[The petitioner’s] contributions to the advancement of critically important thermal energy storage technology have demonstrated high levels of significance and novelty and his future contributions are expected to be similarly extraordinary. He has made groundbreaking contributions to the solution of these energy-related problems and thus to the development of “cutting edge” energy storage systems.

Dr. [redacted] mentions that the petitioner had a critical role in a project entitled “energy efficiency improvement and fuel saving in water heaters using baffles” that received funding from the [redacted]. In addition, Dr. [redacted] states that the petitioner joined the [redacted] group and has played a key role in a project on ‘[redacted]’ funded by the [redacted]. While the petitioner may have played an important role in the preceding projects, there is no documentary evidence showing that he has performed in a leading or critical role for the [redacted] group, the [redacted].

In his February 17, 2014 letter, Dr. [redacted] states:

I cannot emphasize the enormous contributions [the petitioner] made as a research assistant at [REDACTED]. Specifically, two particular notable achievements that come to mind are two projects, funded by the [REDACTED] and the [REDACTED], during which [the petitioner] had a major role.

The preceding letters of support discuss the petitioner's work as a graduate research assistant at [REDACTED] under the direction of Dr. [REDACTED]. While the petitioner performed admirably on the two projects to which he was assigned, there is no evidence demonstrating that his subordinate role as a Ph.D. student and research assistant was leading or critical for [REDACTED] its Department of Mechanical Engineering, the [REDACTED]. In general, a leading role is demonstrated by evidence of where the petitioner fits within the hierarchy and duties of an organization or establishment, while a critical role is demonstrated by evidence of the petitioner's contributions to the organization or establishment. The petitioner did not provide an organizational chart or other similar evidence to establish where his role as a research assistant fit within the overall hierarchy of [REDACTED] Department of Mechanical Engineering, the [REDACTED]. With respect to [REDACTED], the petitioner's evidence does not demonstrate how his temporary graduate student role differentiated him from the other researchers and engineers working in his department, let alone [REDACTED] tenured faculty and principal investigators. The submitted documentation does not differentiate the petitioner from the other researchers and faculty so as to demonstrate his leading role, and fails establish that he contributed to the university, the [REDACTED] in a way that was significant to their success or standing. Furthermore, there is no documentary evidence showing that his department has earned a distinguished reputation relative to other universities' mechanical engineering research programs.

In light of the above, the petitioner has not established that he meets this regulatory criterion.

B. Summary

The petitioner has failed to satisfy the antecedent regulatory requirement of three categories of evidence.

III. CONCLUSION

The documentation submitted in support of a claim of extraordinary ability must clearly demonstrate that the alien has achieved sustained national or international acclaim and is one of the small percentage who has risen to the very top of the field of endeavor.

Even if the petitioner had submitted the requisite evidence under at least three evidentiary categories, in accordance with the *Kazarian* opinion, the next step would be a final merits determination that considers all of the evidence in the context of whether or not the petitioner has demonstrated: (1) a "level of expertise indicating that the individual is one of that small percentage who have risen to the very top of the[ir] field of endeavor" and (2) "that the alien has sustained national or international acclaim and that his or her achievements have been recognized in the field of expertise." 8 C.F.R. § 204.5(h)(2) and (3); *see also Kazarian*, 596 F.3d at 1119-20. Although we conclude that the evidence

is not indicative of a level of expertise consistent with the small percentage at the very top of the field or sustained national or international acclaim, we need not explain that conclusion in a final merits determination.⁴ Rather, the proper conclusion is that the petitioner has failed to satisfy the antecedent regulatory requirement of three categories of evidence. *Id.* at 1122.

The petitioner has not established eligibility pursuant to section 203(b)(1)(A) of the Act and the petition may not be approved.

In visa petition proceedings, it is the petitioner's burden to establish eligibility for the immigration benefit sought. Section 291 of the Act, 8 U.S.C. § 1361; *Matter of Otiende*, 26 I&N Dec. 127, 128 (BIA 2013). Here, that burden has not been met.

ORDER: The appeal is dismissed.

⁴ The AAO conducts appellate review on a *de novo* basis. See *Siddiqui v. Holder*, 670 F.3d 736, 741 (7th Cir. 2012); *Soltane v. DOJ*, 381 F.3d 143, 145 (3d Cir. 2004); *Dor v. INS*, 891 F.2d 997, 1002 n. 9 (2d Cir. 1989). In any future proceeding, the AAO maintains the jurisdiction to conduct a final merits determination as the office that made the last decision in this matter. 8 C.F.R. § 103.5(a)(1)(ii). See also section 103(a)(1) of the Act; section 204(b) of the Act; DHS Delegation Number 0150.1 (effective March 1, 2003); 8 C.F.R. § 2.1 (2003); 8 C.F.R. § 103.1(f)(3)(iii) (2003); *Matter of Aurelio*, 19 I&N Dec. 458, 460 (BIA 1987) (holding that legacy INS, now USCIS, is the sole authority with the jurisdiction to decide visa petitions).