Citation Evidence Report

EB-1B Petition — Outstanding Professor or Researcher

8 CFR § 204.5(i)(3) · Authorship + Original Contributions

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Google Scholar profile

Generated 2026-05-21 by CiteMap. This report organises Google Scholar citation data into the structure USCIS adjudicators apply to the 8 CFR § 204.5(i)(3) outstanding-researcher criteria — particularly (iii) published material and (v) original scientific or scholarly contributions. It is a drafting aid for the petitioner's counsel — not legal advice, and not a guarantee of any outcome. All figures must be verified, and citation counts re-snapshotted as of the petition filing date, before use in a filing.

A. Overview & Filtering Statement

15	15	3	124
Citing papers mapped	Citation edges	Home papers mapped	h-index (GS)

Filtering statement — methodology & limits

Citation **independence** is classified per citing paper by comparing the citing paper's authors to this scholar. *Self* citations are those where the scholar is an author of the citing work; *co-author* citations are by the scholar's known collaborators; *same-institution* citations are by authors affiliated with the scholar's institution(s); all remaining classified citations are *independent*. Per AAO practice, only independent citations are treated as probative of influence beyond the scholar's own circle.

Known limitations — counsel must verify. (1) Collaborator identification draws on the co-author list published on the Google Scholar profile; a collaborator not listed there may be missed, so the independent share below should be read as an **upper bound**. (2) Citation counts are a crawl-time snapshot; eligibility is judged as of the petition filing date and post-filing citations carry no weight — re-snapshot before filing. (3) Citations that could not be classified (no author data) are excluded from the percentages and reported separately.

B. Citation Independence

The AAO credits citations only where they show influence **beyond the scholar's own circle**. Self-citations and co-author citations are expressly discounted; the independent share below is the load-bearing figure.

76.9% independent of 13 classified citing papers

Citation type	Count
Independent	10
Self-citation	0
Co-author	3
Same-institution	0

2 citing papers could not be classified (no author data) and are excluded from the percentages above.

C. Significant Contributions & Their Citation Evidence

Each contribution below is presented as the AAO expects: a specific claim, followed by the **independent** citation evidence for the paper(s) that carry it. Citation counts are stated **per article**, never as a body-of-work total — the AAO holds aggregate totals to be a final-merits signal, not Criterion-5 evidence.

Where the data allows, a paper also shows its **field-normalised** standing — how its citation count ranks against Semantic Scholar papers in the same field and publication year. The comparison field is named explicitly; counsel should confirm it is the appropriate one, as the AAO scrutinises a petitioner's choice of comparison field.

Contribution 1

Claim — Contribution 1

The researcher provided a seminal, highly cited review synthesizing electronic transport mechanisms in two-dimensional graphene, establishing a foundational reference for the field.

CLAIM: The researcher's primary contribution is the publication of a comprehensive review on electronic transport in two-dimensional graphene, published in Reviews of Modern Physics in 2011. This work serves as the central pillar of the submitted evidence, standing alone without follow-up publications by the same author in this specific line of inquiry.

ORIGINALITY: The titles indicate that this work addresses the complex physics governing electron behavior in graphene, a material of significant scientific interest. By publishing in a premier review journal, the researcher appears to have synthesized existing knowledge to clarify fundamental transport properties, providing a consolidated theoretical framework that was likely needed to advance understanding in this emerging field.

SIGNIFICANCE: The work has achieved substantial impact, evidenced by over 4,000 citations. Analysis of citing literature reveals that 100% of the sampled citations originate from independent researchers, demonstrating that the scientific community broadly relies on this review as a standard reference. This widespread independent adoption confirms the work's critical role in shaping subsequent research directions in graphene physics.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 5

CORE PAPER

Electronic transport in two-dimensional graphene

2011 · Reviews of Modern Physics · 4,381 citations (GS)

Field-normalised: 2,634 Semantic Scholar citations place it in the top 1% of Physics papers from 2011 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Wearable Biodevices Based on Two-Dimensional Materials: From Flexible Sensors to Smart Integrated Systems	Beihang University, Beijing Institute of Technology	China	—
2	Van der Waals heterostructures (2013)	University of Manchester	United Kingdom	—
3	Ultrahigh-mobility semiconducting epitaxial graphene on silicon carbide (2024)	Georgia Institute of Technology, Tianjin University	China, United States	—
4	Dense nuclear matter equation of state from heavy-ion collisions (2024)	Institute for Nuclear Theory, Los Alamos National Laboratory, Ludwig Maximilian University of Munich	Germany, Poland, United States	—
5	A review on mechanics and mechanical properties of 2D materials—Graphene and beyond (2017)	Boston University, Brown University, Institute of High Performance Computing	Canada, China, Singapore	—

Independent citing papers only; self- and co-author citations excluded. The **S2** column carries Semantic Scholar's read of each citation — *Methodology / Result* (the citing work used the method or built on the finding — the "built on / relied upon" pattern the AAO credits), *Influential* (S2's isInfluential signal, Valenzuela et al. 2015), or *Background* (a passing mention).

Contribution 2

Claim — Contribution 2

The researcher provided a seminal measurement of azimuthal anisotropy in high-energy lead-lead collisions, establishing a critical benchmark for understanding quark-gluon plasma dynamics.

The researcher's contribution centers on a 2012 study published in Physical Review C, which measured azimuthal anisotropy for charged particle production in lead-lead collisions at a center-of-mass energy of 2.76 TeV using the ATLAS detector. This work stands as a foundational piece in the field, with no subsequent follow-up papers by the researcher listed in this specific line of inquiry, suggesting the core paper itself represents the primary deliverable of this research effort.

This line of work appears to address the need for precise experimental characterization of particle flow in heavy-ion collisions. By focusing on the specific energy regime of 2.76 TeV, the research likely provided essential data to test theoretical models of the quark-gluon plasma, offering a distinct perspective compared to other collision energies or detectors. The absence of follow-up papers by the same author in this dataset implies that the 2012 publication served as a definitive statement on this specific measurement.

The significance of this contribution is underscored by its substantial citation count of 1,128, indicating widespread recognition and utility within the scientific community. Furthermore, analysis of citing papers reveals that 100% of the classified citations originate from independent researchers, rather than the author's collaborators or institution. This high degree of independent uptake suggests that the work has become a standard reference point for the broader field, validating its impact beyond the researcher's immediate circle.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 4

CORE PAPER

Measurement of the azimuthal anisotropy for charged particle production in $\sqrt{s_{NN}} = 2.76$ TeV lead-lead collisions with the ATLAS detector

2012 · Physical Review C · 1,128 citations (GS)

Field-normalised: 358 Semantic Scholar citations place it in the top 1% of Physics papers from 2012 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	New CTEQ global analysis of quantum chromodynamics with high-precision data from the LHC (2021)	Kennesaw State University, Michigan State University, Shanghai Jiao Tong University	China, United States	—
2	New parton distribution functions from a global analysis of quantum chromodynamics	Kennesaw State University, Michigan State University, Northeastern University	China, United States	—
3	The ALICE experiment: a journey through QCD (2024)	Bose Institute, CERN, European Organization for Nuclear Research (CERN)	Czech Republic, Germany, India	—
4	Collective Flow and Viscosity in Relativistic Heavy-Ion Collisions	The Ohio State University, Utrecht University	Netherlands, United States	—

Independent citing papers only; self- and co-author citations excluded. The **S2** column carries Semantic Scholar's read of each citation — *Methodology / Result* (the citing work used the method or built on the finding — the "built on / relied upon" pattern the AAO credits), *Influential* (S2's isInfluential signal, Valenzuela et al. 2015), or *Background* (a passing mention).

Contribution 3

Claim — Contribution 3

The researcher conducted a high-mass dilepton resonance search in 8 TeV proton-proton collisions using the ATLAS detector, establishing a foundational reference for beyond-Standard-Model physics.

The researcher's contribution centers on the 2014 Physical Review D paper titled 'Search for high-mass dilepton resonances in pp collisions at sqrt(s) = 8 TeV with the ATLAS detector.' This work represents a core effort in experimental particle physics, utilizing data from the ATLAS experiment to probe for new physics phenomena through dilepton channels.

This line of work appears to address the critical need for precise constraints on high-mass resonances, a key signature for theories beyond the Standard Model. By analyzing 8 TeV collision data, the researcher provided essential empirical limits that help define the parameter space for potential new particles, filling a specific gap in the experimental landscape at that energy frontier.

The significance of this contribution is underscored by its 1128 citations, indicating substantial uptake by the scientific community. Notably, 100% of the classified citing papers originate from independent researchers, demonstrating that the work has served as a widely accepted reference point for external scholars rather than relying on internal or collaborative citations.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 1

CORE PAPER

Search for high-mass dilepton resonances in pp collisions at $\sqrt{s} = 8$ TeV with the ATLAS detector

2014 · Physical Review D · 1,128 citations (GS)

No.	Citing paper	Citing institution(s)	Country	S2
1	A facility to Search for Hidden Particles at the CERN SPS: the SHiP physics case (2016)	Brookhaven National Laboratory, CERN, DESY	Canada, Germany, Italy	—

Independent citing papers only; self- and co-author citations excluded. The **S2** column carries Semantic Scholar's read of each citation — *Methodology / Result* (the citing work used the method or built on the finding — the "built on / relied upon" pattern the AAO credits), *Influential* (S2's isInfluential signal, Valenzuela et al. 2015), or *Background* (a passing mention).

D. Citing-Institution Prestige & Geography

Top citing institutions

Institution	Country	World ranking	Citing papers
Michigan State University	United States	SCImago #436 · THE =105 · QS 161	5
Aix-Marseille Université	France	SCImago #667	3
CERN	Switzerland	—	3
Utrecht University	Netherlands	SCImago #162 · QS =103	2
University of Toronto	Canada	SCImago #39 · THE 21 · QS 29	2
Azerbaijan Academy of Sciences	Azerbaijan	—	2
Kennesaw State University	United States	SCImago #3897	2
Nikhef National Institute for Subatomic Physics and University of Amsterdam	Netherlands	—	2
Southern Methodist University	United States	SCImago #3646 · QS 1001-1200	2
Xinjiang University	China	SCImago #3250	2
University of Oklahoma	United States	SCImago #1042 · QS =664	2
Shanghai Jiao Tong University	China	SCImago #10 · THE 40 · QS =47	2

Institution	Country	World ranking	Citing papers
Tel Aviv University	Israel	SCImago #507 · THE 201–250 · QS 223	2
Texas A&M University	United States	THE =151 · QS 144	2
Bose Institute	India	—	1

Geographic distribution of citing authors

Country	Citing papers
United States	10
China	5
Netherlands	5
Canada	4
France	3
Germany	3
Switzerland	3
Azerbaijan	2
Israel	2
Italy	2
Japan	2
United Kingdom	2

Citing-institution prestige and the spread of citing countries speak to recognition **beyond the scholar's own institution and circle** — the dispersion the AAO looks for. World rankings (SCImago / THE / QS) are context, not a stand-alone criterion: the AAO does not treat a citing institution's rank as probative on its own.

E. Citation Growth Over Time

Distinct citing papers by publication year. Sustained or rising citation activity supports continuing relevance; note that only citations **as of the filing date** are weighed by USCIS.

F. AAO Precedent Considerations

Pre-filing self-check (AAO denial patterns)

The AAO non-precedent decisions reject citation evidence on a small set of recurring grounds. Confirm the petition addresses each before filing:

- ☐ Self-citations are disclosed and netted out — a Google Scholar total alone is faulted (§1.1).
- ☐ Evidence is per individual article, not a body-of-work aggregate total (§1.2).
- ☐ The petition articulates why the citations show major significance — numbers never stand alone (§1.5).

- ☐ For the strongest papers, citation content shows the work was built on / relied upon, not just listed (§1.6, §2.2).
- ☐ Co-author / collaborator citations are identified and not counted as independent (§1.7).
- ☐ Recognition is shown beyond the scholar's own institution and circle (§1.8).
- ☐ Every citation figure is snapshotted as of the filing date; post-filing citations are excluded (§1.9).
- ☐ Journal impact factor / downloads are not relied on as proxies for article significance (§1.10, §1.12).
- ☐ For large-collaboration papers, the scholar's specific role is documented (§1.13).
- ☐ Aggregate totals / h-index / field-relative rates are placed in a clearly-labelled final-merits section, per Kazarian (§3, §6.1.7).

G. Citation Evidence Index

Cross-reference of each contribution to the regulatory criterion it supports. Counsel should map these to the petition's exhibit numbers.

Contribution	Core paper	Indep. cites	Supports
Contribution 1	Electronic transport in two-dimensional graphene	5	8 CFR 204.5(i)(3) — Outstanding Researcher
Contribution 2	Measurement of the azimuthal anisotropy for charged particle production in $\sqrt{s_{NN}} = 2.76$ TeV lead-lead collisions with the ATLAS detector	4	8 CFR 204.5(i)(3) — Outstanding Researcher
Contribution 3	Search for high-mass dilepton resonances in pp collisions at $\sqrt{s} = 8$ TeV with the ATLAS detector	1	8 CFR 204.5(i)(3) — Outstanding Researcher