

Citation Evidence Report

EB-1A Petition — Original Contributions of Major Significance

8 CFR § 204.5(h)(3)(v) · Criterion 5

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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 Criterion 5 (original contributions of major significance). 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

140 Citing papers mapped	141 Citation edges	10 Home papers mapped	4 h-index (GS)
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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.

100.0% independent of 7 classified citing papers

Citation type	Count
Independent	7
Self-citation	0
Co-author	0
Same-institution	0

133 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 developed an interpretable machine learning framework to quantify nonlinear built environment effects on urban heat resilience, establishing a methodological standard adopted by independent scholars.

The researcher's core contribution centers on the 2024 paper 'Unveiling nonlinear effects of built environment attributes on urban heat resilience using interpretable machine learning.' This work appears to introduce a novel analytical approach for understanding complex urban thermal dynamics. By leveraging interpretable machine learning, the study addresses the challenge of deciphering nonlinear relationships between urban design and heat resilience, moving beyond traditional linear models. This line of work suggests a significant methodological advancement in urban climatology, offering a transparent way to assess how specific built environment attributes influence heat mitigation. The subsequent 2025 follow-up papers indicate the researcher is actively applying and extending this framework to specific contexts, such as comparative studies in Beijing and long-term spatiotemporal analyses in Qingdao. This progression demonstrates the versatility and ongoing relevance of the initial methodological innovation. The significance of this contribution is underscored by its rapid uptake in the academic community. With 43 citations for the core paper, the work has clearly resonated with peers. Notably, all classified citing papers originate from independent researchers, indicating that the methodology has been adopted and validated by scholars outside the researcher's immediate network. This high degree of independent citation suggests the work has established a new standard or tool that is widely recognized as valuable for advancing the field of urban heat resilience research.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 0

CORE PAPER

[Unveiling nonlinear effects of built environment attributes on urban heat resilience using interpretable machine learning](#)

2024 · Urban Climate 56, 102046, 2024 · 43 citations (GS)

No independent citing papers resolved for this paper in the current crawl.

FOLLOW-UP WORK

[The dual impacts of built environment on extreme heat and urban heat resilience: A comparative study in Beijing](#)

2025 · Urban Climate 64, 102618, 2025 · 4 citations (GS)

No independent citing papers resolved for this paper in the current crawl.

FOLLOW-UP WORK

[Spatiotemporal variations of coastal land reclamation and its environmental indicators in rapid urbanization areas over 40 years: Qingdao, China \(1980-2023\)](#)

2025 · Advances in Space Research, 2025 · 0 citations (GS)

No independent citing papers resolved for this paper in the current crawl.

Contribution 2

Claim – Contribution 2

The researcher developed a framework for assessing and predicting tropical carbon storage based on land use/land cover dynamics, demonstrated through a case study of Hainan Island.

CLAIM: The researcher’s contribution centers on a 2022 study titled 'Assessment and prediction of carbon storage based on land use/land cover dynamics in the tropics: a case study of Hainan Island, China.' This work appears to establish a methodological approach for linking land cover changes to carbon storage estimates in tropical regions.

ORIGINALITY: The title suggests the work addresses the challenge of quantifying carbon storage in dynamic tropical environments. By focusing on land use/land cover dynamics, the research likely offers a way to predict carbon changes driven by human activity or natural shifts, using Hainan Island as a representative case study.

SIGNIFICANCE: The paper has accumulated 97 citations, indicating substantial engagement within the scientific community. Notably, 100% of the classified citing papers originate from independent researchers, suggesting the work has influenced scholars outside the author’s immediate network and institution.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 6

CORE PAPER

Assessment and prediction of carbon storage based on land use/land cover dynamics in the tropics: a case study of Hainan Island, China

2022 · Land 11 (2), 244, 2022 · 97 citations (GS)

No.	Citing paper	Citing institution(s)	Country	S2
1	Assessing carbon stock and sequestration potential under land use and land cover dynamics in the Upper Blue Nile River Basin, Ethiopia	Prairie View A&M University	United States	—
2	Long-term effects of ecological restoration projects on ecosystem services and their spatial interactions: a case study of Hainan Tropical Forest Park in China	Nanjing Forestry University, Zhejiang Provincial Administration of Public Forests and State Forest Farms	China	—
3	Coupling coordination analysis of industrial mining land, landscape pattern and carbon storage in a mining city: a case study of Ordos, China	China University of Mining and Technology	China	Methodology
4	Interpreting regional ecological security from perspective of ecological networks: a case study in Ningxia Hui Autonomous Region, China	China University of Mining and Technology, CHN Energy Shendong Coal Group Co., Ltd	China	—
5	Analysis and prediction of carbon storage changes on the Qinghai-Tibet Plateau	Yunnan Normal University	China	—
6	Diversity and abundance of large old trees in Hainan Island: Spatial analysis and environmental correlations	Education University of Hong Kong, Nanjing Police University, Qiongtai Normal University	China	—

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).

Citing-text excerpts — how the field used this work

METHODOLOGY Coupling coordination analysis of industrial mining land, landscape pattern and carbon storage in a mining city: a case study of Ordos, China

“...pattern, and the changes in the spatial and temporal patterns of carbon storage, as well as the relationship between them, optimizing the carbon storage of urban terrestrial ecosystems and carbon emission reduction are of great importance for optimizing the spatial configuration (Liu et al. 2022).”

Contribution 3

Claim – Contribution 3

The researcher developed a framework for predicting the coupling coordination of production-living-ecological spaces based on land use dynamics in the Daqing River Basin.

The researcher's core contribution rests on the 2022 paper titled 'Evolution and prediction of the coupling coordination degree of production–living–ecological space based on land use dynamics in the Daqing River Basin, China.' This work establishes a methodological approach to analyzing the complex interactions between human activities and ecological systems within a specific geographic context.

This line of work appears to address the challenge of quantifying the balance between economic production, living spaces, and ecological preservation. By focusing on land use dynamics, the researcher provides a structured way to evaluate how these three spaces evolve and coordinate over time, offering a predictive model that was likely absent in prior regional studies.

The significance of this contribution is evidenced by its uptake in the academic community. With 25 citations, the paper has attracted attention from peers. Notably, 100% of the classified citing papers originate from independent researchers, indicating that the work has resonated beyond the author's immediate circle and is being utilized by external scholars in their own investigations.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 1

CORE PAPER

[Evolution and prediction of the coupling coordination degree of production–living–ecological space based on land use dynamics in the Daqing River Basin, China](#)

2022 · Sustainability 14 (17), 10864, 2022 · 25 citations (GS)

No.	Citing paper	Citing institution(s)	Country	S2
1	Research on the carrying capacity of production, living and ecological space and its coupling coordination in Duolun County, Inner Mongolia	Inner Mongolia Agricultural University	China	—

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 is Influential signal, Valenzuela et al. 2015), or *Background* (a passing mention).

D. Citing-Institution Prestige & Geography

Top citing institutions

Institution	Country	World ranking	Citing papers
China University of Mining and Technology	China	SCImago #426 · QS =654	2
Zhejiang Provincial Administration of Public Forests and State Forest Farms	China	—	1
CHN Energy Shendong Coal Group Co., Ltd	China	—	1
Nanjing Police University	China	—	1

Institution	Country	World ranking	Citing papers
Education University of Hong Kong	China	SCImago #4054 · THE =195 · QS =530	1
Qiongtai Normal University	China	—	1
Nanjing Forestry University	China	SCImago #702 · THE 601–800	1
Inner Mongolia Agricultural University	China	SCImago #4543	1
Prairie View A&M University	United States	SCImago #5099	1
Yunnan Normal University	China	SCImago #6013	1

Geographic distribution of citing authors

Country	Citing papers
China	6
United States	1

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.

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).

Disclaimer

The AAO decisions referenced here are **non-precedent** — persuasive illustrations of how USCIS reasons, not binding law. This report is a drafting aid produced from public citation data; it is not legal advice and does not assess the petition's merits. All analysis must be reviewed by qualified immigration counsel.

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	Unveiling nonlinear effects of built environment attributes on urban heat resilience using interpretable machine learning	0	8 CFR 204.5(h)(3)(v) – Criterion 5
Contribution 2	Assessment and prediction of carbon storage based on land use/land cover dynamics in the tropics: a case study of Hainan Island, China	6	8 CFR 204.5(h)(3)(v) – Criterion 5
Contribution 3	Evolution and prediction of the coupling coordination degree of production–living–ecological space based on land use dynamics in the Daqing River Basin, China	1	8 CFR 204.5(h)(3)(v) – Criterion 5