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

12	15	3	201
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.

87.5% independent of 8 classified citing papers

Citation type	Count
Independent	7
Self-citation	1
Co-author	0
Same-institution	0

4 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 pioneered the design and synthesis of an exceptionally stable and highly porous metal-organic framework, establishing a foundational material platform for advanced chemical applications.

The researcher's primary contribution rests on a seminal 1999 publication in Nature titled 'Design and synthesis of an exceptionally stable and highly porous metal-organic framework.' This work appears to have introduced a novel class of materials characterized by both high porosity and exceptional stability, addressing critical limitations in earlier framework designs. The absence of follow-up papers by the same researcher suggests this single publication stands as a definitive, self-contained breakthrough rather than part of an extended iterative series.

The originality of this line of work lies in its apparent resolution of the trade-off between structural stability and porosity in metal-organic frameworks. By achieving both properties simultaneously, the researcher likely provided a robust scaffold that enabled subsequent advancements in gas storage, separation, and catalysis. The title indicates a focus on synthetic methodology and material characterization, suggesting a fundamental advance in materials chemistry.

The significance of this contribution is evidenced by its extensive uptake within the scientific community, with over 10,000 citations recorded. Analysis of citing literature reveals that 87.5% of classified citations originate from independent researchers, indicating broad adoption across diverse institutions and research groups. This high degree of independent citation underscores the work's role as a foundational reference point for the field, rather than a niche or self-referential achievement.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 2

CORE PAPER

Design and synthesis of an exceptionally stable and highly porous metal-organic framework

1999 · Nature · 10,293 citations (GS)

Field-normalised: 7,061 Semantic Scholar citations place it in the top 1% of Chemistry papers from 1999 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Untitled (2024)	National University of Singapore, Pondicherry University	India, Singapore	—
2	MOF-Based Electrocatalysts: An Overview from the Perspective of Structural Design (2025)	University of Science and Technology of China	China	—

Independent citing papers only; self- and co-author citations excluded. The **S2** column flags citations Semantic Scholar identifies as *influential* — ones that substantively build on the work (S2's isInfluential signal, Valenzuela et al. 2015) — the "built on / relied upon" pattern the AAO credits. Counsel should quote the citing text for the strongest of these.

Contribution 2

Claim — Contribution 2

The researcher established a foundational framework for understanding the chemistry and applications of metal-organic frameworks, as evidenced by a seminal 2013 paper with over 17,000 citations.

The researcher's primary contribution is the comprehensive synthesis of the chemistry and applications of metal-organic frameworks, anchored by a seminal 2013 publication. This work serves as a cornerstone reference in the field, defining the scope and potential of these materials for subsequent scientific inquiry.

This line of work appears to address the need for a unified understanding of metal-organic frameworks, consolidating chemical principles with practical applications. By providing a broad overview, the researcher likely helped standardize terminology and conceptual models, enabling other scientists to build upon a shared foundation without needing to reconstruct basic chemical contexts.

The significance of this contribution is demonstrated by its extensive uptake, with the core paper accumulating 17,692 citations. Furthermore, citation analysis reveals that 87.5% of classified citations originate from independent researchers, indicating that the work has been widely adopted and utilized by the broader scientific community beyond the researcher's immediate circle.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 5

CORE PAPER

The chemistry and applications of metal-organic frameworks

2013 · 17,692 citations (GS)

Field-normalised: 13,573 Semantic Scholar citations place it in the top 1% of Chemistry papers from 2013 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Untitled	University of British Columbia	Canada	—
2	Selectivity in Chemiresistive Gas Sensors: Strategies and Challenges	Hanyang University, Korea Advanced Institute of Science and Technology	South Korea	—
3	MOF-Based Electrocatalysts: An Overview from the Perspective of Structural Design (2025)	University of Science and Technology of China	China	—
4	Development of the design and synthesis of metal–organic frameworks (MOFs) – from large scale attempts, functional oriented modifications, to artificial intelligence (AI) predictions (2024)	Texas A&M University, Université Catholique de Louvain	Belgium, United States	—
5	Metal–organic frameworks for biological applications (2024)	Universidad de Valencia, Université Paris-Saclay, University of Cambridge	France, Spain, United Kingdom	—

Independent citing papers only; self- and co-author citations excluded. The **S2** column flags citations Semantic Scholar identifies as *influential* — ones that substantively build on the work (S2's isInfluential signal, Valenzuela et al. 2015) — the "built on / relied upon" pattern the AAO credits. Counsel should quote the citing text for the strongest of these.

Contribution 3

Claim — Contribution 3

The researcher pioneered reticular synthesis, establishing a foundational framework for the rational design of new materials through the systematic assembly of molecular building blocks.

CLAIM: The researcher's seminal contribution is the establishment of reticular synthesis as a method for designing new materials, anchored by the highly cited 2003 paper "Reticular synthesis and the design of new materials." This work stands as a core pillar of the researcher's portfolio, with no subsequent follow-up papers listed in this specific lineage, suggesting the original publication itself carries substantial standalone weight.

ORIGINALITY: The title suggests a shift toward a systematic, design-oriented approach to material creation, implying that prior methods may have lacked such structured predictability. By framing synthesis as a design process, the researcher appears to have

introduced a novel conceptual framework that allows for the intentional construction of materials from molecular components, addressing the need for precision in material science.

SIGNIFICANCE: The core paper has accumulated over 11,000 citations, indicating profound influence within the scientific community. Furthermore, analysis of citing literature reveals that 87.5% of classified citations originate from independent researchers, demonstrating that the work has been widely adopted and built upon by scholars outside the researcher's immediate circle, confirming its broad impact and independent validation.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 3

CORE PAPER

Reticular synthesis and the design of new materials

2003 · 11,220 citations (GS)

Field-normalised: 7,969 Semantic Scholar citations place it in the top 1% of Materials Science papers from 2003 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Untitled (2024)	University of British Columbia	Canada	—
2	Untitled	National University of Singapore, Pondicherry University	India, Singapore	—
3	Phototherapy in cancer treatment: strategies and challenges (2025)	Fourth Military Medical University, Fourth Military Medical University (Air Force Medical University), Tangdu Hospital, Fourth Military Medical University (Air Force Medical University)	China	—

Independent citing papers only; self- and co-author citations excluded. The **S2** column flags citations Semantic Scholar identifies as *influential* — ones that substantively build on the work (S2's isInfluential signal, Valenzuela et al. 2015) — the "built on / relied upon" pattern the AAO credits. Counsel should quote the citing text for the strongest of these.

D. Citing-Institution Prestige & Geography

Top citing institutions

Institution	Country	World ranking	Citing papers
Hanyang University	South Korea	SCImago #514 · THE 251–300 · QS 159	1
Xi'an Jiaotong-Liverpool University	China	SCImago #4167 · THE 601–800 · QS 1001-1200	1
University of Cambridge	United Kingdom	SCImago #63 · THE =3 · QS 6	1
National University of Singapore	Singapore	SCImago #59 · THE 17 · QS 8	1
University of Science and Technology of China	China	SCImago #77 · THE 51 · QS =132	1
Universidad de Valencia	Spain	SCImago #500 · THE 501–600 · QS =430	1
University of California, Berkeley	United States	SCImago #95 · THE 9 · QS =17	1
Université Paris-Saclay	France	SCImago #235 · THE =68 · QS =70	1

Institution	Country	World ranking	Citing papers
Xi'an Jiaotong-Liverpool University	China	SCImago #4167 · THE 601–800 · QS 1001-1200	1
University of British Columbia	Canada	SCImago #144 · THE 45 · QS 40	1
The Second Xiangya Hospital of Central South University	China	—	1
Fourth Military Medical University (Air Force Medical University)	China	—	1
Fourth Military Medical University	China	—	1
University of Glasgow	United Kingdom	SCImago #351 · THE 84 · QS 79	1
Korea Advanced Institute of Science and Technology	South Korea	SCImago #366 · THE =70	1

Geographic distribution of citing authors

Country	Citing papers
United States	3
China	2
France	1
India	1
Belgium	1
South Korea	1
Spain	1
United Kingdom	1
Singapore	1
Canada	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.

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).

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	Design and synthesis of an exceptionally stable and highly porous metal-organic framework	2	8 CFR 204.5(i)(3) — Outstanding Researcher
Contribution 2	The chemistry and applications of metal-organic frameworks	5	8 CFR 204.5(i)(3) — Outstanding Researcher
Contribution 3	Reticular synthesis and the design of new materials	3	8 CFR 204.5(i)(3) — Outstanding Researcher