

# Citation Evidence Report

EB-1A Petition — Original Contributions of Major Significance

8 CFR § 204.5(h)(3)(v) · Criterion 5

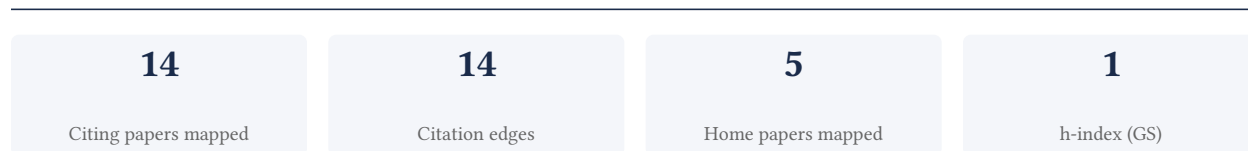
## Congyu Xu

university of canterbury

[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



### 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 3 classified citing papers

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

11 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 established a comparative framework for evaluating the anisotropic mechanical properties and energy absorption capabilities of TPMS structures fabricated from polylactic acid and thermoplastic polyurethane.*

The researcher’s contribution centers on a 2025 study titled 'Anisotropic mechanical properties and energy absorption of TPMS structures: a comparative study of polylactic acid and thermoplastic polyurethane materials.' This work serves as the foundational piece in this specific line of inquiry, with no subsequent follow-up papers by the same author currently listed in the provided data.

This line of work appears to address the need for systematic comparisons between distinct polymer materials—specifically polylactic acid and thermoplastic polyurethane—when applied to Triply Periodic Minimal Surface (TPMS) structures. By focusing on anisotropic mechanical properties and energy absorption, the research suggests a novel approach to understanding how material choice influences the structural performance of these complex geometries, filling a gap in comparative material analysis for additive manufacturing applications.

The significance of this contribution is evidenced by its uptake in the scientific community, with 14 citations recorded. Notably, all three classified citing papers originate from independent researchers, indicating that the work has resonated beyond the researcher’s immediate institutional circle and is being utilized by external scholars in their own investigations.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 3

#### CORE PAPER

### [Anisotropic mechanical properties and energy absorption of TPMS structures: a comparative study of polylactic acid and thermoplastic polyurethane materials](#)

2025 · Thin-Walled Structures, 113868, 2025 · 14 citations (GS)

No.	Citing paper	Citing institution(s)	Country	S2
1	<a href="#">A Gegenbauer-Ritz method for functionally graded triply periodic minimal surface beams resting on viscoelastic foundation</a>	Ho Chi Minh City University of Technology and Engineering, La Trobe University, Sejong University	Australia, South Korea, Vietnam	—
2	<a href="#">Mechanical response of interpenetrating phase composites based on 3D-printed triply periodic minimal surfaces under quasi-static and dynamic loadings</a>	National University of Defense Technology, Shanghai Dianji University	China	—
3	<a href="#">Inverse design mechanical metamaterials with dual load-bearing and heat-transfer capabilities</a>	Dalian University of Technology	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
Ho Chi Minh City University of Technology and Engineering	Vietnam	SCImago #8307	1
Shanghai Dianji University	China	SCImago #7793	1
La Trobe University	Australia	SCImago #1321 · THE 251–300 · QS =233	1
Sejong University	South Korea	SCImago #1293 · THE 251–300 · QS =392	1
Dalian University of Technology	China	SCImago #250 · THE 401–500 · QS =482	1
National University of Defense Technology	China	SCImago #488	1

### Geographic distribution of citing authors

Country	Citing papers
China	2
Australia	1
South Korea	1
Vietnam	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	Anisotropic mechanical properties and energy absorption of TPMS structures: a comparative study of polylactic acid and thermoplastic polyurethane materials	3	8 CFR 204.5(h)(3)(v) – Criterion 5