

# Citation Evidence Report

EB-1A Petition — Original Contributions of Major Significance

8 CFR § 204.5(h)(3)(v) · Criterion 5

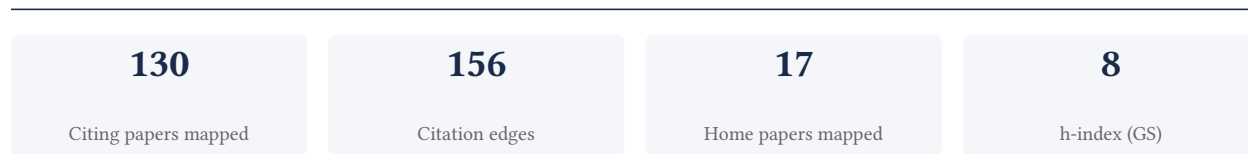
## Jianzhong Li

Nanjing Normal University

[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 13 classified citing papers

Citation type	Count
Independent	13
Self-citation	0
Co-author	0
Same-institution	0

117 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 a methodological framework for estimating chlorophyll-a in eutrophic inland waters using Orbita Hyperspectral imagery and Landsat-8 observations.*

The researcher established a foundational approach for remotely monitoring water quality, anchored by a 2021 core paper assessing Orbita Hyperspectral capabilities for chlorophyll-a detection in eutrophic plateau lakes. This work appears to address the technical challenge of accurately retrieving biological parameters in complex inland water bodies using specific hyperspectral sensors.

Building on this foundation, the researcher published follow-up studies in 2023 that refined semi-analytical models for spatial-temporal patterns and expanded the scope to analyze trophic levels in the Poyang Lake Basin using Landsat-8. This progression suggests a deliberate effort to validate and generalize remote sensing techniques for inland eutrophic waters.

The significance of this line of work is evidenced by substantial independent uptake. With the core paper cited 21 times and subsequent papers receiving 24 and 21 citations respectively, the research has attracted attention from the broader scientific community. Notably, 100% of classified citations originate from independent researchers, indicating that the methodology has been adopted and utilized by peers outside the researcher's immediate network.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 7

#### CORE PAPER

### [Simulation and assessment of the capabilities of Orbita Hyperspectral \(OHS\) imagery for remotely monitoring chlorophyll-a in eutrophic plateau lakes](#)

2021 · Remote Sensing 13 (14), 2821, 2021 · 21 citations (GS)

No.	Citing paper	Citing institution(s)	Country	S2
1	<a href="#">Research progress in surface water quality monitoring based on remote sensing technology</a>	Jiangsu Xingyue Surveying and Mapping Technology Co., Ltd, Petro Mohyla Black Sea National University, Yancheng Polytechnic College	China, Ukraine	<b>Methodology</b>
2	<a href="#">Nanoparticles in terrestrial sediments and the behavior of the spectral optics of Sentinel-3B OLCI Satellite images in a river basin of UNESCO World Cultural and ...</a>	ATITUS Educação, Federal University of Rio Grande do Sul, Federal University of Western Pará	Brazil, Portugal, 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).

#### Citing-text excerpts — how the field used this work

**METHODOLOGY** Research progress in surface water quality monitoring based on remote sensing technology

"...Japan, Enmap data from Germany, and HJ-1 HIS, HY-1A COCTS, GF5-AHSI, and Zhuhai-1 OHS data from China, have been used for water quality retrieval (Bannari et al. 2015; Cui et al. 2022; Hill et al. 2019; D. J. Keith et al. 2014; Y. Liu et al. 2022; R. Zhang et al. 2021), which are shown in Table 2."

#### FOLLOW-UP WORK

### [A semi-analytical model to estimate Chlorophyll-a spatial-temporal patterns from Orbita Hyperspectral image in inland eutrophic waters](#)

No.	Citing paper	Citing institution(s)	Country	S2
1	<a href="#">Chinese new satellite HJ-2 imagery application in quantifying lake chlorophyll-a: empirical, semi-analytical and machine learning algorithms</a>	Changchun Institute of Technology, Chinese Academy of Sciences, Northeast Institute of Geography and Agroecology, Chinese Academy of Sciences	China	—
2	<a href="#">Current and emerging techniques for oceanic and lake chlorophyll-a estimation and monitoring: a global perspective</a>	University of Natural Resources and Life Sciences, Vienna, University of Sharjah	Austria, United Arab Emirates	—
3	<a href="#">Spatiotemporal assessment of surface water dynamics and quality in Harike Wetland, Punjab, using multi-sensor remote sensing and field observations</a>	Punjab Agricultural University, Punjab Remote Sensing Centre	India	—

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).

**FOLLOW-UP WORK**

**[Estimating effects of natural and anthropogenic activities on trophic level of inland water: analysis of Poyang Lake Basin, China, with Landsat-8 observations](#)**

2023 · Remote Sensing 15 (6), 1618, 2023 · 21 citations (GS)

No.	Citing paper	Citing institution(s)	Country	S2
1	<a href="#">Spatiotemporal evolution of temperature extremes onset times and their association with atmospheric circulations in the Poyang Lake basin, China</a>	Gannan Normal University	China	—
2	<a href="#">Remote sensing inversion of lake water quality and its response to human activities in multi-scale buffer zones</a>	Yellow River Engineering Consulting Corporation Limited, Zhengzhou 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).

**Contribution 2**

**Claim – Contribution 2**

*The researcher developed satellite-based methods to assess dissolved organic matter humification in Chinese lakes and enhanced water transparency algorithms for turbid plateau waters.*

The researcher’s contribution centers on advancing remote sensing techniques for water quality assessment, anchored by the 2024 core paper on humification levels in eastern plain lakes of China. This work is extended by a 2025 follow-up study that proposes an enhanced algorithm for estimating water transparency in turbid plateau waters using hyperspectral imagery.

This line of work appears to address the challenge of monitoring complex aquatic environments across diverse geographical settings. By moving from long-term satellite observations of dissolved organic matter to specialized algorithms for turbid waters,

the research suggests a methodological progression aimed at improving the accuracy of water quality metrics in difficult optical conditions.

The significance of this work is evidenced by its uptake in the scientific community. The core paper has accumulated 24 citations, while the follow-up has received 4. Notably, all 13 classified citing papers originate from independent researchers, indicating that the methodology and findings have been adopted by peers outside the researcher’s immediate institution or collaboration network.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 2

CORE PAPER

**[Humification levels of dissolved organic matter in the eastern plain lakes of China based on long-term satellite observations](#)**

2024 · Water Research 250, 120991, 2024 · 24 citations (GS)

No.	Citing paper	Citing institution(s)	Country	S2
1	<a href="#">Comprehensive insights into the occurrence characteristics of dissolved organic matter and its indication for heavy metals in drinking water sources</a>	Anhui Ecological and Environmental Monitoring Center, Hefei University of Technology	China	—
2	<a href="#">Dissolved organic matter dynamics in South African nearshore waters and freshwater systems: Linkages to changing human activity, episodic events, and biodiversity</a>	Columbia University, Council for Scientific and Industrial Research, NASA Ames Research Center	South Africa, 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).

FOLLOW-UP WORK

**[Enhanced algorithm for water transparency estimation in turbid plateau waters using Orbita Hyperspectral \(OHS\) Imagery](#)**

2025 · IEEE Transactions on Geoscience and Remote Sensing, 2025 · 4 citations (GS)

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

## D. Citing-Institution Prestige & Geography

### Top citing institutions

Institution	Country	World ranking	Citing papers
South African Environmental Observation Network	South Africa	—	1
International Research Center of Big Data for Sustainable Development Goals	China	SCImago #5036	1
University of Cape Town	South Africa	SCImago #1052 · THE =164 · QS 150	1
Chinese Academy of Sciences	China	SCImago #2	1
University Sains Malaysia	Malaysia	—	1

Institution	Country	World ranking	Citing papers
Debre Markos University	Ethiopia	SCImago #8102	1
University of Venda	South Africa	SCImago #6358	1
Xiamen University	China	SCImago #275 · THE 251–300 · QS 341	1
Columbia University	United States	SCImago #65 · THE 20 · QS =38	1
Federal University of Rio Grande do Sul	Brazil	SCImago #1267 · THE 601–800 · QS =691	1
NASA Goddard Space Flight Center	United States	SCImago #1045	1
Hefei University of Technology	China	SCImago #638	1
Zhengzhou University	China	SCImago #101 · QS =618	1
University of Minho	Portugal	THE 601–800 · QS =566	1
Council for Scientific and Industrial Research	South Africa	SCImago #5652	1

### Geographic distribution of citing authors

Country	Citing papers
China	6
United States	2
Ethiopia	1
India	1
Malaysia	1
Austria	1
Portugal	1
South Africa	1
Ukraine	1
United Arab Emirates	1
México	1
Brazil	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

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### 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	Simulation and assessment of the capabilities of Orbita Hyperspectral (OHS) imagery for remotely monitoring chlorophyll-a in eutrophic plateau lakes	7	8 CFR 204.5(h)(3)(v) – Criterion 5
Contribution 2	Humification levels of dissolved organic matter in the eastern plain lakes of China based on long-term satellite observations	2	8 CFR 204.5(h)(3)(v) – Criterion 5