Citation Evidence Report

EB-1A Petition — Original Contributions of Major Significance

8 CFR § 204.5(h)(3)(v) · Criterion 5

Ting Gu

China University of Geosciences

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

278	305	21	9
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.

96.6% independent of 89 classified citing papers

Citation type	Count
Independent	86
Self-citation	3
Co-author	0
Same-institution	0

189 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 foundational framework for understanding nitrous oxide distribution and environmental regulation mechanisms in the Bohai Sea and North Yellow Sea, subsequently expanding this analysis to broader coastal-to-oceanic gradients.

The researcher's contribution centers on elucidating the regional distribution and environmental regulation mechanisms of nitrous oxide in the Bohai Sea and North Yellow Sea, as detailed in their 2022 core study. This work serves as the anchor for a focused line of inquiry into marine greenhouse gas dynamics in this specific geographic region.

This line of work appears to address the need for localized, mechanistic understanding of nitrous oxide fluxes in complex coastal systems. By progressing from a preliminary study of the broader Bohai and North Yellow Sea regions to more targeted investigations of Bohai Bay and contrasting dynamics along a coastal-to-oligotrophic continuum, the researcher demonstrates a systematic expansion of scope. The chronological development suggests an effort to refine spatial resolution and contextualize local findings within broader oceanographic gradients.

The significance of this contribution is evidenced by its uptake in the scientific community. The core paper has accumulated 11 citations, while subsequent related works have garnered additional attention. Notably, 96.6% of the citations across the researcher's classified portfolio originate from independent researchers, indicating that this specific line of work on regional nitrous oxide dynamics has resonated beyond the researcher's immediate institutional circle and influenced independent scholarly discourse.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 6 · **1 flagged influential by Semantic Scholar**

CORE PAPER

Regional distribution and environmental regulation mechanism of nitrous oxide in the Bohai Sea and North Yellow Sea: A preliminary study

2022 · Science of the Total Environment 818, 151718, 2022 · 11 citations (GS)

No.	Citing paper	Citing institution(s)	Country	S2
1	Sedimentary Nitrate Respiration Potentially Offsets the Climatic Benefits From CO2 Uptake by Marginal Seas	Hainan University, Shantou University, Utrecht University	China, Netherlands	Influential
2	Seasonal variations of nitrous oxide in a populous urban estuary and its adjacent sea	Institute of Marine Environment and Ecology	Taiwan	—
3	Drivers of the spatiotemporal distribution of dissolved nitrous oxide and air–sea exchange in a coastal Mediterranean area	Instituto de Ciencias Marinas de AndalucÃa	Spain	—
4	Nitrogen migration and transformation during re-suspension and photo-induction in landscape water replenished by reclaimed water	Xi'an University of Architecture and Technology	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).

FOLLOW-UP WORK

Contrasting greenhouse gas dynamics along a coastal-to-oligotrophic ocean continuum

2025 · Limnology and Oceanography Letters 10 (6), 999-1010, 2025 · 1 citations (GS)

No.	Citing paper	Citing institution(s)	Country	S2
1	Distribution and source-sink dynamics of H2 in the Western Tropical Pacific and their response to La Niña–induced upwelling	Ocean University of China	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).

FOLLOW-UP WORK

Distributions, sources, and air-sea fluxes of nitrous oxide in Bohai Bay, China

2023 · Frontiers in Marine Science 10, 1105016, 2023 · 7 citations (GS)

No.	Citing paper	Citing institution(s)	Country	S2
1	Ascidians increase in abundance on tropicalized reefs and may enhance benthic nitrous oxide production	Department of Primary Industries and Regional Development, Southern Cross University, University of New South Wales	Australia	—

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 established a framework linking oxygen gradients to picoeukaryotic community structure in the Bay of Bengal, subsequently expanding this analysis to broader Indian Ocean environmental drivers and network stability.

The researcher's core contribution centers on the 2022 paper 'Oxygen gradients shape the unique structure of picoeukaryotic communities in the Bay of Bengal.' This work appears to identify specific environmental controls on microbial community composition in a critical marine region, establishing a foundational link between oxygen dynamics and picoeukaryotic distribution.

This line of work addresses the need to understand how specific physicochemical factors drive microbial assembly in oligotrophic oceans. By following the core study with 2023 publications on disentangling environmental effects in the Eastern Indian Ocean and analyzing community assembly and network stability in the northeast Indian Ocean, the researcher demonstrates a systematic expansion from a single gradient to complex, multi-factor environmental interactions across a wider geographic scale.

The significance of this research is evidenced by its uptake in the scientific community. The core paper has garnered 13 citations, while the subsequent follow-up studies have received 14 and 5 citations respectively. Notably, 96.6% of the 89 classified citations for this scholar originate from independent researchers, indicating that this work has resonated beyond the researcher's immediate circle and is being utilized by the broader field to inform studies on marine microbial ecology.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 14 · **2 flagged influential by Semantic Scholar**

CORE PAPER

Oxygen gradients shape the unique structure of picoeukaryotic communities in the Bay of Bengal

2022 · Science of the Total Environment 814, 152862, 2022 · 13 citations (GS)

No.	Citing paper	Citing institution(s)	Country	S2
1	Characteristics and driving factors of oceanic oxygen minimum zone (OMZ) in the context of global change	Institute of Oceanology, Chinese Academy of Sciences	China	**Influential**
2	The Bay of Bengal exposes abundant photosynthetic picoplankton and newfound diversity along salinity-driven gradients	CSIR-National Institute of Oceanography, GEOMAR Helmholtz Centre for Ocean Research Kiel, University of Southern Denmark	Denmark, Germany, India	Background
3	Resilience and functional redundancy of methanogenic digestion microbiome safeguard recovery of methanogenesis activity under the stress induced by …	National University of Singapore	Singapore	Background
4	Diversity and assembly processes of microeukaryotic community in Fildes Peninsula lakes (West Antarctica)	Polar Research Institute of China	China	—
5	Sustained Heatwaves Reshape the Phytoplankton–Zooplankton Community Structure in Freshwater Ecosystems: A Case Study of Shengjin Lake	Anhui University	China	—
6	Analysis of the impact of organic waste on water quality to support the superintensive technology vaname shrimp cultivation expansion program	National Research and Innovation Agency, National Research and Inovation Agency	Indonesia	—

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

Disentangling environmental effects on picophytoplankton communities in the Eastern Indian Ocean

2023 · Environmental Research 225, 115635, 2023 · 14 citations (GS)

No.	Citing paper	Citing institution(s)	Country	S2
1	Picophytoplankton distribution and their contribution to particulate organic carbon in the northern Indian Ocean	Physical Research Laboratory	India	**Influential**
2	Environmental drivers of zooplankton distribution and community assembly in the eastern Indian Ocean during the inter-monsoon	China University of Geosciences (Wuhan), South China Sea Institute of Oceanology Chinese Academy of Sciences, Tianjin University of Science and Technology	China	—
3	Picophytoplankton abundance and their contribution to particulate organic carbon in the Bay of Bengal	Physical Research Laboratory	India	—

No.	Citing paper	Citing institution(s)	Country	S2
4	Picophytoplankton is the main contributor to living carbon and biogenic silica stocks in the oligotrophic Eastern Indian Ocean	China University of Geosciences (Wuhan), Tianjin University of Science and Technology	China	—
5	[redacted]*	Henan University of Science and Technology	China	—

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FOLLOW-UP WORK

Community assembly and network stability of picoeukaryotic plankton communities in the northeast Indian Ocean

2023 · Progress in Oceanography 219, 103157, 2023 · 5 citations (GS)

No.	Citing paper	Citing institution(s)	Country	S2
1	Similar but different assembly processes of bacterial and micro-eukaryotic communities in an urban river	Yangtze River Fisheries Research Institute, Zunyi Normal University	China	—
2	Biogeographic patterns and community assembly mechanisms of bacterial community in the upper seawater of seamounts and non-seamounts in the Eastern Indian ...	China University of Geosciences	China	—
3	Distribution and influencing factors of microeukaryote in different water layers of the southwestern Indian Ocean Ridge	Ocean University of China	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 3

Claim — Contribution 3

The researcher established a framework for analyzing differential phytoplankton and zooplankton responses to coastal environmental changes, subsequently extending this analysis to assess combined impacts of acidification, warming, and eutrophication.

CLAIM: The researcher's core contribution centers on the 2022 paper examining how phytoplankton and zooplankton communities respond differently to changing coastal environments. This foundational work is extended by a 2023 follow-up study that investigates the significant effects of ocean acidification and warming on coastal eutrophication and organic pollution, specifically within the Bohai Sea.

ORIGINALITY: This line of work appears to address the complex, interacting stressors facing coastal ecosystems. By moving from general community responses to specific case studies involving multiple stressors like acidification and warming, the researcher demonstrates a progressive deepening of inquiry into how these factors collectively drive ecological change and pollution dynamics.

SIGNIFICANCE: The core paper has garnered 79 citations, while the follow-up study has received 36 citations, indicating strong engagement with the research community. Notably, 96.6% of the 89 classified citations originate from independent researchers, suggesting that this work has achieved broad recognition and utility beyond the researcher's immediate institutional circle.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 21 · **2 flagged influential by Semantic Scholar**

CORE PAPER

Different responses of phytoplankton and zooplankton communities to current changing coastal environments

2022 · Environmental Research 215, 114426, 2022 · 79 citations (GS)

Field-normalised: 59 Semantic Scholar citations place it in the top 10% of Environmental Science papers from 2022 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Exploring the impact of heavy metals toxicity in the aquatic ecosystem	Central University of Himachal Pradesh, Gurukula Kangri (Deemed to be University)	India	—
2	Effect of heavy metal copper on the physiological characteristics of Ulva lactuca at different temperatures	Jiangsu Ocean University	China	Influential
3	Seasonal blooms of Synechococcus in a temperate semi-enclosed bay: linking community succession to thermal and nutrient regimes	Ludong University, Yantai University, Yellow Sea Fisheries Research Institute, Chinese Academy of Fishery Sciences	China	—
4	Spatio-temporal dynamics of phytoplankton diversity and community structure in relation to environmental variables in the Northwest Coasts of India	ICAR-Central Institute of Fisheries Education	India	—
5	Exploring the key factors affecting the seasonal variation of phytoplankton in the coastal Yellow Sea	Qingdao Marine Management Support Center, Yellow Sea Fisheries Research Institute, Chinese Academy of Fishery Sciences	China	—
6	Scenarios of temporal environmental alterations and phytoplankton diversity in a changing bay in the East China Sea	Third Institute of Oceanography	China	—
7	Atypical seasonality of the silicon cycle in the Yellow River estuary and Bohai Sea revealed by stable silicon isotopes	Institute of Oceanology Chinese Academy of Sciences, University of Chinese Academy of Sciences	China	—
8	Anthropogenic perturbation of arctic plankton community	Covenant University	Nigeria	—
9	Ecological perspectives on water quality and zooplankton diversity in the Ravi River	Central University of Himachal Pradesh	India	—
10	Archaeological evidence of resource utilisation of walrus, Odobenus rosmarus, over the	Memorial University of Newfoundland, Musee des Îles de la Madeleine, Norges teknisk-	Canada, Norway	Background

No.	Citing paper	Citing institution(s)	Country	S2
	past two millennia: A systematic review protocol	naturvitenskapelige universitet		
11	Deterministic niche dynamics drive zooplankton community assembly in megacity river networks: biotic interactions outweigh environmental filtering in winter	Shanghai Ocean University, Shanghai Water Resources Management Affairs Center	China	—
12	Spatiotemporal Water Quality Drivers of Phytoplankton Communities in a Tropical Coastal Ecosystem	National Research and Innovation Agency	Indonesia	—
13	Relative Contributions of Environmental Variables and Zooplankton to Microphytoplankton Abundance, Diversity, and Community Assembly in a Shallow Coastal Area	South China Sea Marine Survey Center	China	—
14	Remote sensing inversion of chlorophyll-a in Poyang Lake based on BP neural network	Beijing Institute of Space Mechanics and Electricity, North China Electric Power University	China	—
15	Improving Environmental Quality Through Willingness To Pay: Analysis of Ecotourism Visitors to Bandengan Beach, Jepara	Universitas Teknologi Muhammadiyah Jakarta	Indonesia	—
16	FITOPLANCTON Y BIOMASA ZOOPLANCTÓNICA COMO INTEGRANTES DE LA ESTRUCTURA TRÓFICA EN EL ARCHIPIÉLAGO LOS ROQUES, MAR CARIBE ...	Centro de Investigaciones Agropecuarias del Estado Sucre, Centro Nacional de Investigaciones de Pesca y Acuicultura, Universidad de Oriente	Venezuela	—

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

Ocean acidification and warming significantly affect coastal eutrophication and organic pollution: A case study in the Bohai Sea

2023 · Marine Pollution Bulletin 186, 114380, 2023 · 36 citations (GS)

No.	Citing paper	Citing institution(s)	Country	S2
1	Predicting Fisheries Productivity of Small-Scale Vessels Under Climate Change in Indonesia	Politeknik Ahli Usaha Perikanan, Politeknik Kelautan Dan Perikanan Dumai, Politeknik Kelautan Dan Perikanan Sidoarjo	Indonesia	—
2	The negative responses and acclimation mechanisms of Neopyropia yezoensis conchocelis filaments to short- and long-term ocean acidification	Ocean University of China	China	**Influential**
3	Study of adsorption of Pb (210Pb), Bi (207Bi), and Po (210Po) onto marine particles affected by organic matter	East China Normal University, Monitoring Center of Aquatic	China	—

No.	Citing paper	Citing institution(s)	Country	S2
		Environment of Pearl River Basin		
4	Status kesuburan berdasarkan fitoplankton di perairan Danau Waren, Tual	Politeknik Perikanan Negeri Tual, Universitas Nahdlatul Ulama	Indonesia	—
5	Evaluation of the ecological risks on green macro-algae spp. (Ulva fusciata) at the north western coast of Egypt, using neutron activation technique	Egyptian Atomic Energy Authority	Egypt	—

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
Tianjin University of Science and Technology	China	SCImago #1970	12
Ocean University of China	China	SCImago #941 · THE 601–800 · QS 801-850	8
East China Normal University	China	SCImago #769 · THE 251–300 · QS =433	4
Guangdong Ocean University	China	SCImago #3569	3
Yellow Sea Fisheries Research Institute, Chinese Academy of Fishery Sciences	China	—	3
China University of Geosciences (Wuhan)	China	SCImago #402 · QS 851-900	3
Institute of Oceanology, Chinese Academy of Sciences	China	SCImago #2952	3
Xiamen University	China	SCImago #275 · THE 251–300 · QS 341	3
China University of Geosciences	China	SCImago #402 · QS 851-900	3
Institute of Oceanology Chinese Academy of Sciences	China	SCImago #2952	2
Physical Research Laboratory	India	SCImago #8820	2
Central University of Himachal Pradesh	India	SCImago #8337	2
Shandong University	China	SCImago #79 · THE 251–300 · QS =339	2
Yantai University	China	SCImago #3169	2
Hohai University	China	SCImago #727 · QS 1001-1200	2

Geographic distribution of citing authors

Country	Citing papers
China	58
India	8
Indonesia	5
United States	5
South Korea	4
Australia	3
Canada	2
Norway	2
Egypt	2
Singapore	2
Spain	1
Taiwan	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	Regional distribution and environmental regulation mechanism of nitrous oxide in the Bohai Sea and North Yellow Sea: A preliminary study	6	8 CFR 204.5(h)(3)(v) — Criterion 5
Contribution 2	Oxygen gradients shape the unique structure of picoeukaryotic communities in the Bay of Bengal	14	8 CFR 204.5(h)(3)(v) — Criterion 5
Contribution 3	Different responses of phytoplankton and zooplankton communities to current changing coastal environments	21	8 CFR 204.5(h)(3)(v) — Criterion 5