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 2026-06-01 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

140	194	15	8
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.

80.7% independent of 135 classified citing papers

Citation type	Count
Independent	109
Self-citation	15
Co-author	11
Same-institution	0

5 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 nondestructive structural health monitoring by establishing hyperspectral reflectance for rebar corrosion detection and extending spectral methods to ASR characterization.

The researcher's core contribution rests on the 2023 paper 'Hyperspectral reflectance for determination of steel rebar corrosion and Cl– concentration,' which appears to establish a novel optical method for assessing concrete infrastructure integrity. This work addresses the critical need for nondestructive techniques to detect internal degradation mechanisms, such as chloride-induced corrosion, that are otherwise difficult to monitor without invasive testing.

Building on this foundation, the researcher expanded the scope of spectral analysis in subsequent 2024 publications. The titles suggest a broadening of the methodological framework to include long-period fiber grating sensors for general structural health monitoring and the application of SWIR spectroscopy for characterizing alkali-silica reaction products. This progression indicates a systematic effort to diversify nondestructive detection capabilities for various concrete deterioration processes.

The significance of this line of work is evidenced by substantial citation activity. The core paper has accumulated 44 citations, while the follow-up reviews and studies have each garnered 22 citations. Notably, 80.7% of the 135 classified citations originate from independent researchers, suggesting that the broader scientific community recognizes and utilizes these methods beyond the researcher's immediate circle.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 62 · **1 flagged influential by Semantic Scholar**

CORE PAPER

Hyperspectral reflectance for determination of steel rebar corrosion and Cl– concentration

2023 · 44 citations (GS)

No.	Citing paper	Citing institution(s)	Country	S2
1	Evolution of digital twin frameworks in bridge management: Review and future directions	Western Sydney University	Australia	—
2	Advancements in digital twin-enhanced health monitoring and condition assessment of cable-supported bridges	Nanyang Technological University, Southeast University	China, Singapore	—
3	Exploring the influence of Cu addition on the microstructure and substance transformation in corrosion product layer of X80 steel	Changzhou University	China	—
4	Quantitative analysis of chlorophyll in Catalpa bungei leaves based on partial least squares regression and spectral reflectance index	Chinese Academy of Forestry, Northeast Forestry University, Taiwan Forestry Research Institute	China, Taiwan	—
5	Assessment of chloride ingress in concrete using short-wave infrared hyperspectral imaging	American University of Beirut	Lebanon	—
6	Estimation of coarse aggregate properties in concrete using hyperspectral imaging and machine learning	Pusan National University	South Korea	—
7	Corrosion severity index (CSI) for spectral characterization of corroded steel and iron samples	Universidad de Las Palmas de Gran Canaria	Spain	—
8	Detection method for chloride ion penetration distribution in concrete based on hyperspectral images and LSTM	Anhui Jianzhu University, Dalian Jiaotong University	China	—

No.	Citing paper	Citing institution(s)	Country	S2
9	Effect of Ce on structural evolution and corrosion resistance of HRB500E rebar corrosion layer	—	—	—
10	Hyperspectral Signatures for Detecting the Concrete Hydration Process Using Neural Networks	BOKU University, Stadtwerke Straubing (Germany), Technical University of Vienna	Austria, Germany	—
11	Hyperspectral reflectance spectroscopy for rapid nondestructive microstructural evaluation of high strength internally cured concrete	Indian Institute of Space Science and Technology	India	—
12	3D Single List Set Partitioning in Hierarchical Trees For Onboard Hyperspectral Image Sensors	—	—	—
13	Graphene-Coated Stainless Steel for Oxidation Resistance: Suppressing Oxide Growth and Stabilizing Dielectric Properties under Thermal Treatment	National Nuclear Energy Agency of Indonesia, Universitas Gadjah Mada, Universitas PGRI Semarang	Indonesia	—
14	Drone-Based Multimodal Sensing on Vegetations and Data Analytics for Early Detection of Gas Leakage from Underground Pipelines	Missouri University of Science and Technology	United States	—
15	Novel Means of Salt Concentration Prediction and Mapping on Metallic Surfaces Using Shortwave-Infrared Hyperspectral Imaging	National Nuclear Laboratory, Sellafield (United Kingdom), University of Strathclyde	United Kingdom	—
16	Alkali-Silica Reaction (ASR) Expansion: The Role of CSH Degradation in the Presence of Alkalis	The University of Tokyo, Yokohama National University, Zhejiang University	China, Japan	—
17	SHM data processing using low-rank techniques: from time-series vibration data to vision-based image data	The Hong Kong Polytechnic University	China	—
18	Chloride intrusion detection in reinforced concrete by hyperspectral imaging: A study on dry-wet conditions	American University of Beirut	Lebanon	—
19	Surface and subsurface corrosion detection based on hyperspectral imaging in the visible and infrared range	Universidad de Las Palmas de Gran Canaria	Spain	—
20	Localised Corrosion Induced by Non-Metallic Inclusions in Rebar Hrb400e Alloyed with Re	Shanghai University	China	—
21	[redacted]	—	—	—
22	Health Inspection of Concrete Pavement and Bridge Members Exposed to Freeze-Thaw Service Environment	National Research Council Canada	Canada	—
23	Localized corrosion induced by nonmetallic inclusions in rebar HRB400E alloyed with rare earth (2025)	—	—	—
24	MF-TAC Graph Convolution for Hyperspectral Classification of Chloride Ingress States in Concrete	—	—	—

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

Application of long-period fiber grating sensors in structural health monitoring: A review

2024 · 22 citations (GS)

No.	Citing paper	Citing institution(s)	Country	S2
1	Alkali-Silica Reaction (ASR) Expansion: The Role of CSH Degradation in the Presence of Alkalis	The University of Tokyo, Yokohama National University, Zhejiang University	China, Japan	—
2	Research progress of intelligent testing technology and evaluation methods for subgrade engineering	Anhui Jianzhu University, China University of Mining and Technology, Southeast University	China	—
3	Advances and prospects of nanomaterial coatings in optical fiber sensors	Sun Yat-sen University	China	—
4	Design and fabrication of short-period long period gratings for refractive index sensing	Scuola Superiore Sant'Anna	Italy	—
5	Efficient C1-Continuous Deformation Measurement of Thin-Plate Structures via Strain-Based Method and Variational Principle	null, Xidian University	China	—
6	Structure-Modulated Long-Period Fiber Gratings: A Review.	Harbin Engineering University, Heilongjiang University of Science and Technology	China	—
7	Biosensor Advancements for Addressing Agricultural and Environmental Challenges: A Review	—	—	—
8	AI-Assisted Fibre Optic Sensing Frameworks for Automated Monitoring of Railway Infrastructure	Western Sydney University	Australia	—
9	Progress in Sensing Mechanisms and Integration for Hydrophones: A Review	Huazhong University of Science and Technology	China	—
10	Electrochemical monitoring of alkali-silica reaction using carbon nanomaterial-integrated cementitious sensors	Xinjiang Agricultural University	China	—
11	Towards robust machine learning-based LPFG temperature sensing demodulation with limited data via diffusion models	Hainan University, University of Technology Sydney	Australia, China	—
12	Refractive Index Sensing Using Small-Period LPGs in Transmission and Reflection Configurations	Scuola Superiore Sant'Anna	Italy	—
13	Elucidating the absorption and performance of acetone gas sensor detection using ITO coated D-shape optical fiber at visible region	—	—	—
14	Long-period fiber grating high-sensitivity torsion sensor based on rotating single-mode fiber	Chongqing Three Gorges University, Harbin Engineering University, Yangtze Normal University	China	—

No.	Citing paper	Citing institution(s)	Country	S2
15	Spherical LPFG high-sensitivity strain sensor based on V-shaped fiber core	Chongqing Three Gorges University, Harbin Engineering University	China	—
16	Apodized long period grating and sensitivity analysis of high order resonant wavelengths for temperature measurement	—	—	—
17	Strong Refractive Index Modulation LPFG Sensor Based on the Periodically Cascaded S-Shaped Fiber Core Structure	Chongqing Three Gorges University, Harbin Engineering University	China	—
18	Fiber optic displacement sensor with multimode-single mode-multimode structure for structural health monitoring applications	Centro Laser, Tuxtla Gutierrez Institute of Technology	Italy, Mexico	—
19	Potential of Fiber Optic Sensors for the Detection of Effects in Predictive Life Cycle Management of Road Bridges	—	—	—
20	Potential of Fiber Optic Sensors for the	École Nationale Supérieure de Chimie de Montpellier, Gdańsk University of Technology	France, Poland	—
21	Potential of Fiber Optic Sensors for the	École Nationale Supérieure de Chimie de Montpellier, Gdańsk University of Technology	France, Poland	—

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

Characterization of alkali-silica reaction (ASR) products and CSH using SWIR spectroscopy for nondestructive detection of ASR

2024 · 22 citations (GS)

No.	Citing paper	Citing institution(s)	Country	S2
1	Detection method for chloride ion penetration distribution in concrete based on hyperspectral images and LSTM	Anhui Jianzhu University, Dalian Jiaotong University	China	—
2	Drone-Based Multimodal Sensing on Vegetations and Data Analytics for Early Detection of Gas Leakage from Underground Pipelines	Missouri University of Science and Technology	United States	—
3	Developing fully recycled alkali-activated mortar made with waste concrete fines as a substitute for both binder and sand: Multi-properties evaluation	Shanghai University, Shaoxing University, Yangzhou University	China	—
4	Impact of formate based deicing agents on asr products: Microstructural, chemical and mechanical characteristics	Institute of Electronic Materials Technology, Institute of Fundamental Technological Research, Polish Academy of Sciences, Purdue University	Poland, United States	—

No.	Citing paper	Citing institution(s)	Country	S2
5	Chloride-Induced Corrosion Performance of ASR-Contaminated Concrete: Coupled Analysis Using Resistance Variation and NT Build 492 Method	University of Technology Sydney	Australia	Influential
6	Investigation of ASR resistance of nuclear cemented waste forms containing high-nitrate sludge	Belgian Nuclear Research Centre, KU Leuven	Belgium	—
7	AI-driven detection of alkali-silica reaction in concrete structures using feature-enhanced deep learning models (February 2025)	University of Science and Technology Beijing	China	—
8	Comparative analysis of test methods for identifying alkali–silica reactivity in concrete aggregates	King Fahd University of Petroleum and Minerals, King Faisal University, Prince Sattam Bin Abdulaziz University	Pakistan, Saudi Arabia	—
9	Effects of Mineral Admixtures on the Alkali–Silica Reaction in Granite Manufactured Sand Mortar	—	—	—
10	AD-AVSR: Asymmetric Dual-stream Enhancement for Robust Audio-Visual Speech Recognition	Xi'an Jiaotong University, Zhejiang Lab, Zhengzhou University	China	—
11	10 CO_2 Utilization in Cement	null	China	—
12	Industrial Decarbonization: Materials, Methods, and Developments	null	China	—
13	Performance of granulated foam glass in cement matrix composite material	University of Miskolc	Hungary	—
14	Alkali-Silica Reaction (ASR) Expansion: The Role of CSH Degradation in the Presence of Alkalis (2024)	The University of Tokyo, Yokohama National University, Zhejiang University	China, Japan	—
15	Determination of ASR in concrete using characterization methods (2024)	Siirt Üniversitesi	Turkey	—
16	10 CO_2 Utilization in Cement (2025)	null	China	—
17	Industrial Decarbonization: Materials, Methods, and Developments (2025)	—	—	—

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 a hyperspectral imaging framework to identify and discriminate natural gas-induced vegetation stress for pipeline leakage detection.

The researcher's contribution centers on a 2024 study titled 'Natural gas induced vegetation stress identification and discrimination from hyperspectral imaging for pipeline leakage detection.' This work establishes a methodological approach for using remote sensing data to detect infrastructure failures through biological indicators.

This line of work appears to address the challenge of distinguishing specific vegetation stress caused by natural gas leaks from other environmental factors. By focusing on discrimination within hyperspectral data, the research suggests a novel application of spectral analysis for precise pipeline monitoring, moving beyond general stress detection to specific cause identification.

The significance of this contribution is evidenced by its rapid uptake, with 10 citations recorded. Notably, 80.7% of the citing papers originate from independent researchers, indicating that the methodology has attracted broad interest and validation from the wider scientific community outside the researcher's immediate circle.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 7

CORE PAPER

Natural gas induced vegetation stress identification and discrimination from hyperspectral imaging for pipeline leakage detection

2024 · 10 citations (GS)

No.	Citing paper	Citing institution(s)	Country	S2
1	Drone-Based Multimodal Sensing on Vegetations and Data Analytics for Early Detection of Gas Leakage from Underground Pipelines	Missouri University of Science and Technology	United States	—
2	Alkali-Silica Reaction (ASR) Expansion: The Role of CSH Degradation in the Presence of Alkalis	The University of Tokyo, Yokohama National University, Zhejiang University	China, Japan	—
3	A light use efficiency principle guided framework for detecting underground natural gas micro-leakage in multi-crop rotation area using hyperspectral imagery	China University of Mining and Technology, University of Leicester	China, United Kingdom	—
4	Methane emissions from the oil and gas supply chain: Characteristics and mitigation	Chinese Academy of Sciences, Environmental Defense Fund	China, United States	—
5	Fast real-time monitor of rice grains infested with Sitophilus oryzae based on terahertz imaging combined with machine learning	South China University of Technology, University College Dublin	China, Ireland	—
6	Three-Dimensional Spectral Index-Driven Nondestructive Quantification of Chlorophyll in Winter Wheat: Cross-Phenology Extrapolation and Independent Validation	Northwest A&F University	China	—
7	Multi-Component Remote Sensing for Mapping Buried Water Pipelines	Aristotle University of Thessaloniki, EYDAP (Greece)	Greece	—

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 developed a deep learning framework using hyperspectral vegetation indicators for the early detection of natural gas pipeline leaks.

The researcher's core contribution is the development of a method for early detection of pipeline natural gas leakage, as detailed in the 2024 paper titled 'Early detection of pipeline natural gas leakage from hyperspectral imaging by vegetation indicators and

deep neural networks.' This work stands as the primary artifact in this specific line of inquiry, with no follow-up publications by the researcher currently listed.

This line of work appears to address the challenge of monitoring infrastructure integrity by leveraging hyperspectral imaging and deep neural networks. The titles indicate a novel approach that utilizes vegetation indicators as proxies for detecting subsurface gas leaks, suggesting an original integration of remote sensing data with advanced machine learning techniques to identify environmental stressors associated with pipeline failures.

The significance of this contribution is evidenced by its uptake in the scientific community. With 20 citations, the work has attracted attention from peers. Notably, within the broader context of the researcher's portfolio, 80.7% of citing papers originate from independent researchers, indicating that this specific methodology has resonated beyond the researcher's immediate institutional circle and is being adopted or referenced by the wider field.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 18 · **1 flagged influential by Semantic Scholar**

CORE PAPER

Early detection of pipeline natural gas leakage from hyperspectral imaging by vegetation indicators and deep neural networks

2024 · 20 citations (GS)

No.	Citing paper	Citing institution(s)	Country	S2
1	Machine Learning-Driven Dynamic Measurement of Environmental Indicators in Multiple Scenes and Multiple Disturbances	Liaoning University	China	—
2	Alkali-Silica Reaction (ASR) Expansion: The Role of CSH Degradation in the Presence of Alkalis	The University of Tokyo, Yokohama National University, Zhejiang University	China, Japan	—
3	Application of machine learning to leakage detection of fluid pipelines in recent years: A review and prospect	Dalian University of Technology, State Key Laboratory of Hydrology Water Resources and Hydraulic Engineering	China	—
4	Efficient localization and spatial distribution modeling of canopy palms using uav imagery	City University of Hong Kong, Lingnan University, Tulane University	China, Hong Kong, United States	—
5	Federated machine learning enables risk management and privacy protection in water quality	Harbin Institute of Technology, Hefei University of Technology	China	—
6	Knowledge embedding and interpretable machine learning optimize comprehensive benefits for water treatment	Harbin Institute of Technology	China	—
7	Effect of organic phosphonate on fresh properties of alkali-activated slag composites under different systems: Na2SO4, Na2SiO3, Na2CO3	Iowa State University, Missouri University of Science and Technology, Shenzhen University	China, United States	—
8	Machine Learning Predictive Models, Interpretations, and Applications of Metal-Based Catalysts, UV, and Thermal Activation Persulfate-Based Advanced Oxidation ...	—	—	—
9	Adaptive nonuniformity correction methods for push-broom hyperspectral cameras	Chinese Academy of Sciences, Shanghai Institute of Technical Physics	China	—

No.	Citing paper	Citing institution(s)	Country	S2
10	Toward an integrative framework for monitoring biodegradation of environmental contaminants across scales	Lawrence Berkeley National Laboratory	United States	—
11	A light use efficiency principle guided framework for detecting underground natural gas micro-leakage in multi-crop rotation area using hyperspectral imagery	China University of Mining and Technology, University of Leicester	China, United Kingdom	—
12	ARTIFICIAL INTELLIGENCE BASED SOLUTIONS FOR MONITORING CO2 STORAGE RESERVOIRS: A REVIEW	Future Science Group (United Kingdom)	United Kingdom	—
13	Evolving Detectors for Locating Methane Plumes in Hyperspectral Images	European Space Agency, Silesian University of Technology	France, Poland	—
14	Artificial intelligence for CO2 pipeline monitoring: Cross-domain insights from oil, gas, water, and hydrogen systems	Future Science Group (United Kingdom)	United Kingdom	—
15	Remote detection of emergency emissions and gas leaks	—	—	—
16	Comparative Analysis of Photogrammetry Tools for Monitoring Trench and Pipeline Progress Towards Sustainable Construction	Universiti Teknologi PETRONAS	Malaysia	—
17	Deep Learning Method for Hyperspectral Image Reconstruction via Rotated Diffraction Patterns	European Space Agency, RMIT University	Australia, Netherlands	—
18	Colorimetric Surveillance of Gas Leaks in Chemical Industries Using Bioindicator Monitoring System	Av Engineering (Czechia), Bharat Electronics (India), Centre d'Intelligence Artificielle et de Robotique du Mali	Czech Republic, India, Mali	**Influential**

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
Missouri University of Science and Technology	United States	SCImago #3048 · THE 501–600 · QS =628	17
Chinese Academy of Sciences	China	SCImago #2	10
null	China	—	6
Guangxi Academy of Sciences	China	SCImago #6575	4
University of Technology Sydney	Australia	SCImago #475 · THE =145 · QS 96	4
Harbin Engineering University	China	SCImago #1020 · THE 601–800 · QS 1001-1200	4
American University of Beirut	Lebanon	SCImago #3188 · QS =237	4

Institution	Country	World ranking	Citing papers
Shenzhen University	China	SCImago #229 · THE 351–400 · QS =452	4
Chongqing Three Gorges University	China	SCImago #8693	3
Western Sydney University	Australia	SCImago #1979 · THE 301–350 · QS 400	3
Hohai University	China	SCImago #727 · QS 1001-1200	3
Guangxi University	China	SCImago #1037	3
Southeast University	China	THE 251–300 · QS =392	3
Texas A&M University	United States	THE =151 · QS 144	3
The University of Tokyo	Japan	SCImago #141 · THE 26 · QS =36	2

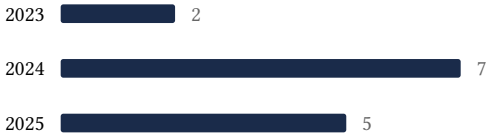
Geographic distribution of citing authors

Country	Citing papers
China	56
United States	25
Australia	7
Poland	5
United Kingdom	5
Lebanon	4
India	4
France	4
Italy	3
Japan	3
Canada	3
Spain	3

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	Hyperspectral reflectance for determination of steel rebar corrosion and Cl– concentration	62	8 CFR 204.5(i)(3) — Outstanding Researcher
Contribution 2	Natural gas induced vegetation stress identification and discrimination from hyperspectral imaging for pipeline leakage detection	7	8 CFR 204.5(i)(3) — Outstanding Researcher
Contribution 3	Early detection of pipeline natural gas leakage from hyperspectral imaging by vegetation indicators and deep neural networks	18	8 CFR 204.5(i)(3) — Outstanding Researcher