# 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 2026-06-11 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

| 536 | 554 | 17 | 6 |
|---|---|---|---|
| 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.

**96.2% independent** of 522 classified citing papers

| Citation type | Count |
|---|---|
| Independent | 502 |
| Self-citation | 8 |
| Co-author | 12 |
| Same-institution | 0 |

14 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 self-rolled-up aluminum nitride 3D architectures, establishing a foundational methodology for extreme miniaturization of passive electronics and microfluidics through record-high differential stress engineering.*

The researcher established a foundational contribution in microfabrication through the 2022 core paper on self-rolled-up aluminum nitride-based 3D architectures enabled by record-high differential stress. This work serves as the technical anchor for a subsequent line of inquiry focused on advanced integration and performance optimization of three-dimensional microstructures.

This line of work appears to address the challenge of creating complex 3D geometries at the microscale. The progression from the core paper to 2024 follow-ups suggests a deliberate expansion from fundamental structural formation to functional application. Specifically, the researcher extended the initial architecture to include deterministic electroplating for inductors and broader technology for integrating passive electronics with microfluidics, indicating a move from proof-of-concept to practical device engineering.

The significance of this contribution is evidenced by the strong independent uptake of the core paper, which has accumulated 28 citations. Notably, 96.3% of the scholar's total classified citations originate from independent researchers, suggesting that this specific line of work has resonated beyond the immediate academic circle and is being utilized by the broader scientific community to advance related fields.

**INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 25**

**CORE PAPER**

**Self-rolled-up aluminum nitride-based 3D architectures enabled by record-high differential stress**

2022 · 28 citations (GS)

| No. | Citing paper | Citing institution(s) | Country | S2 |
|---|---|---|---|---|
| 1 | Band Engineering and Structural-Geometrical Engineering in 2D/3D van der Waals Heterostructures for Advanced Photodetection and Intelligent Sensing | — | — | — |
| 2 | Recent advances in rolled-up on-chip devices | Biomedical Research Networking Center in Bioengineering, Biomaterials and Nanomedicine | Spain | — |
| 3 | Photonic van der Waals integration from 2D materials to 3D nanomembranes | Washington University in St Louis | United States | — |
| 4 | One-step rolling fabrication of VO2 tubular bolometers with polarization-sensitive and omnidirectional detection | Fudan University, State Key Laboratory of Surface Physics | China | — |
| 5 | Micromachined piezoelectric Lamb wave resonators: a review | ShanghaiTech University | China | — |
| 6 | High inductance density in CMOS-compatible magnetically integrated 3D microinductors for radio-frequency applications | State Key Laboratory of Surface Physics | China | — |
| 7 | Graphene-integrated microtube whispering-gallery mode resonators for polarization-sensitive optical modulation and photodetection | State Key Laboratory of Surface Physics | China | — |

| No. | Citing paper | Citing institution(s) | Country | S2 |
|---|---|---|---|---|
| 8 | Strain-Controlled Formation Energy and Migration of Nitrogen Vacancy in Al1−xScxN: A First-Principles Study | Shanghai University | China | — |
| 9 | Roll-to-roll fabrication of three-dimensional self-folding microstructures | Louisiana State University | United States | — |
| 10 | Self-Assembled Inorganic Nanomembrane Tubes: Rolled-Up Piezoelectrics for Microacoustic Wave-Based Actuators and Sensors | CIC nanoGUNE, Leibniz Institute for Solid State and Materials Research | Germany, Spain | — |
| 11 | High-Yield ReS2 Photodetector Array Enabled by Dry-Released Self-Rolled-Up Microtubes and Enhanced through Scalable MoS2 QDs | Beihang University, Beijing Jiaotong University, Chinese Academy of Sciences | China | — |
| 12 | Wafer-scale platform for on-chip 3D radio frequency lumped passive components using metal self-rolled-up membrane technique | Hefei University of Technology | China | — |
| 13 | Analysis of 5– 10 GHz Higher-Order Lamb Acoustic Waves in Thin-Film Scandium Aluminum Nitride | Boston University, The University of Texas at Austin | United States | — |
| 14 | On-chip THz helical antenna based on metal self-rolled-up membrane nanotechnology | China Academy of Information and Communications Technology, Fudan University, Hefei University of Technology | China | — |
| 15 | Progress on 3D tubular passive electronics: Residual stress-based fabrication, application, and modeling | Hefei University of Technology | China | — |
| 16 | Enhanced Upconversion Photoluminescence in Freestanding Er3+ Doped SrTiO3 Scrolls via Strain Gradient Engineering | Nankai University, State Key Laboratory of Information Photonics and Optical Communications | China | — |
| 17 | Tensile behavior and mechanical properties of single-crystal AlN under uniaxial tension loading | Liaoning Shihua University | China | — |
| 18 | Rolled-Up Membranes from GaAs/AlOx Core-Shell Nanowire Ensembles Through Natural Oxidation | Hokkaido University, Shinshu University, The University of Tokyo | Japan | — |
| 19 | Polymer Microstructures for Advanced Biomanufacturing | Louisiana State University | United States | — |
| 20 | Enhancing the performance of chip-scale passive electronic network components by the self-rolled-up membrane technology | The University of Texas at Austin | United States | — |
| 21 | Characterizations of Ultrathin Interfacial Atomic-Layer-Deposited Oxides and Nitrides for Semiconductor Grafting Applications | University of Wisconsin–Madison | 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

**Unleashing the Performance of Self-Rolled-Up 3D Inductors via Deterministic Electroplating on Cylindrical Surfaces**

2024 · 5 citations (GS)

| No. | Citing paper | Citing institution(s) | Country | S2 |
|---|---|---|---|---|
| 1 | Recent advances in rolled-up on-chip devices | Biomedical Research Networking Center in Bioengineering, Biomaterials and Nanomedicine | Spain | — |
| 2 | High inductance density in CMOS-compatible magnetically integrated 3D microinductors for radio-frequency applications | State Key Laboratory of Surface Physics | China | — |
| 3 | Wafer-scale platform for on-chip 3D radio frequency lumped passive components using metal self-rolled-up membrane technique | Hefei University of Technology | China | — |
| 4 | Tunable high-frequency thin-film inductor through stress-induced magnetic anisotropy | Changzhou Booming New Material Technology Co., Ltd, Hangzhou Dianzi 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).

FOLLOW-UP WORK

**S-RuM Technology for Extreme Miniaturization and Integration of Passive Electronics and Microfluidics**

2024 · 0 citations (GS)

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

## Contribution 2

### Claim — Contribution 2

*The researcher established a foundational framework for understanding phosphorene's properties, synthesis, and applications, creating a seminal reference point for the field of two-dimensional black phosphorus.*

CLAIM: The researcher's contribution centers on the 2017 paper titled 'Phosphorene–the two-dimensional black phosphorous: properties, synthesis and applications,' which serves as the core work in this line of research. This publication appears to provide a comprehensive overview of the material's characteristics and potential uses.

ORIGINALITY: The title suggests the work addresses the need for a consolidated resource on phosphorene, covering its fundamental properties, methods of synthesis, and practical applications. By synthesizing these aspects, the researcher likely filled a gap in the literature regarding the systematic understanding of this two-dimensional material.

SIGNIFICANCE: The core paper has accumulated 313 citations, indicating substantial uptake by the scientific community. Furthermore, analysis of 534 citing papers reveals that 96.3% originate from independent researchers, demonstrating that the work has been widely adopted and utilized by scholars outside the researcher's immediate circle.

**INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 296**

CORE PAPER

**Phosphorene–the two-dimensional black phosphorous: properties, synthesis and applications**

2017 · 313 citations (GS)

Field-normalised: 230 Semantic Scholar citations place it in the top 5% of Materials Science papers from 2017 indexed by Semantic Scholar, by citation count.

| No. | Citing paper | Citing institution(s) | Country | S2 |
|---|---|---|---|---|
| 1 | Computational Design of 2D Materials for Zinc-Ion Batteries Using Density Functional Theory Calculations | Hunan Provincial Key Laboratory of Chemical Power Sources, College of Chemistry and Chemical Engineering Central South University Changsha 410083 P. R. China, Nankai University | China | — |
| 2 | Mechanism for redox exfoliation of layered transition metal dichalcogenides | U.S. Air Force Research Laboratory Materials and Manufacturing Directorate | United States | — |
| 3 | Electron-Driven In Situ Transmission Electron Microscopy of 2D Transition Metal Dichalcogenides and Their 2D Heterostructures | Fudan University, Leibniz Institute for Solid State and Materials Research, Lukasiewicz Research Network PORT Polish Center for Technology Development | China, Germany, People's Republic of China | — |
| 4 | Application of two-dimensional materials as anodes for rechargeable metal-ion batteries: A comprehensive perspective from density functional theory simulations | Bauhaus-Universität Weimar, Imam Khomeini International University, Leibniz University Hannover | Germany, Iran | — |
| 5 | Electrically-transduced chemical sensors based on two-dimensional nanomaterials | Dartmouth College | United States | — |
| 6 | Recent advances in two-dimensional-material-based sensing technology toward health and environmental monitoring applications | Shenzhen University | China | — |
| 7 | 2D heterostructures for ubiquitous electronics and optoelectronics: principles, opportunities, and challenges | Hunan University, National Sun Yat-sen University, University of California, Irvine Medical Center | China, Republic of China, United States | — |
| 8 | Black phosphorus, a rising star 2D nanomaterial in the post-graphene era: synthesis, properties, modifications, and photocatalysis applications | Hunan University | China | — |
| 9 | Two-dimensional tellurium: progress, challenges, and prospects | Guangdong Laboratory of Artificial Intelligence and Digital Economy (Shenzhen), Shenzhen People's Hospital, Shenzhen University | China | — |
| 10 | Black phosphorus quantum dots: synthesis, properties, functionalized modification and applications | Qingdao University, Tsinghua University | China | — |
| 11 | Two-dimensional materials for energy conversion and storage | Tianjin University, Wuhan University | China | — |
| 12 | Recent advances in black-phosphorus-based materials for electrochemical energy storage | Hainan Tropical Ocean University, Soochow University, | China, France | — |

| No. | Citing paper | Citing institution(s) | Country | S2 |
|---|---|---|---|---|
| | | Université Bourgogne Franche-Comté | | |
| 13 | Advanced phosphorus-based materials for lithium/sodium-ion batteries: recent developments and future perspectives | Institut National de la Recherche Scientifique | Canada | — |
| 14 | Recent advances in engineering of 2D materials-based heterostructures for electrochemical energy conversion | Northwestern Polytechnical University | China | — |
| 15 | Flexible sensors—from materials to applications | University of Sussex | United Kingdom | — |
| 16 | Recent progress in emerging novel MXenes based materials and their fascinating sensing applications | Peking University, Quaid-i-Azam University, Shenzhen Second People's Hospital | Australia, China, Pakistan | — |
| 17 | Synthesis, modification, and application of black phosphorus, few-layer black phosphorus (FLBP), and phosphorene: a detailed review | Academy of Scientific and Innovative Research, Institute of Advanced Study in Science and Technology, Technical University of Munich | Germany, India | — |
| 18 | Symmetric, asymmetric, and battery-type supercapacitors using two-dimensional nanomaterials and composites | University of Central Florida | United States | — |
| 19 | Chemical vapor deposition of 2D materials: A review of modeling, simulation, and machine learning studies | Indian Institute of Science, Massachusetts Institute of Technology | India, United States | — |
| 20 | Black phosphorus: The rise of phosphorene in 2D materials applications | Cranfield University, Indian Institute of Technology Delhi, London South Bank University | India, United Kingdom | — |
| 21 | 2D Janus SnSeS monolayers for solar energy conversion: insights from DFT and excitonic analysis | Universidade de Brasília | Brazil | — |
| 22 | Exfoliation of 2D materials for energy and environmental applications | Chonnam National University | South Korea | — |
| 23 | Two-dimensional pnictogens: A review of recent progresses and future research directions | Adnan Menderes University, Bilkent University, University of Maryland, Baltimore County | Turkey, United States | — |
| 24 | The tunable electric and magnetic properties of 2D MXenes and their potential applications | Indian Institute of Technology Kharagpur | India | — |
| 25 | Black phosphorene: a versatile allotrope revolutionizing environmental, energy, and biomedical applications | Banaras Hindu University, Kyushu Institute of Technology, National Institute of Technology Silchar | India, Japan, South Korea | — |
| 26 | Black phosphorus-based reusable biosensor platforms for the ultrasensitive detection of cortisol in saliva | Korea University, Seoul National University | South Korea | — |
| 27 | Comprehensive Insights into the Family of Atomically Thin 2D-Materials for Diverse Photocatalytic Applications | Jain (Deemed to be) University | India | — |

| No. | Citing paper | Citing institution(s) | Country | S2 |
|---|---|---|---|---|
| 28 | Advances in tribonegative layer for 2D material-based triboelectric nanogenerators: Material modifications and architectural designs | Jeju National University, Sunchon National University | South Korea | — |
| 29 | Towards a new era of 2D materials-based multifunctional composite films: from innovation to evolution | Khalifa University of Science and Technology | United Arab Emirates | — |
| 30 | Bioactive 2D nanomaterials for neural repair and regeneration | Tongji Hospital, Tongji University | China | — |

**Showing the 30 most-cited of 296 independent citing papers.**

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 advanced magnesium alloy nanocomposite fabrication by demonstrating how ultrasound-assisted stir casting improves the mechanical behavior of AZ31/Al2O3 composites.*

The researcher established a foundational contribution to materials engineering through the 2017 publication on the mechanical behavior of AZ31/Al2O3 magnesium alloy nanocomposites prepared using ultrasound-assisted stir casting. This work serves as the core reference for this line of inquiry, with no subsequent follow-up papers by the same author listed in the provided data.

This line of work appears to address the technical challenges associated with fabricating magnesium-based nanocomposites. By integrating ultrasound assistance into the stir casting process, the research suggests a novel approach to enhancing the mechanical properties of AZ31 alloys reinforced with Al2O3 nanoparticles, potentially improving dispersion and bonding compared to conventional methods.

The significance of this contribution is evidenced by its substantial uptake in the scientific community, with 170 citations recorded for the core paper. Furthermore, citation analysis reveals that 96.3% of the 534 classified citing papers originate from independent researchers, indicating that the work has been widely adopted and built upon by the broader field rather than primarily by the researcher's immediate circle.

**INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 161** · **2 flagged influential by Semantic Scholar**

**CORE PAPER**

### Mechanical behavior of AZ31/Al2O3 magnesium alloy nanocomposites prepared using ultrasound assisted stir casting

2017 · 170 citations (GS)

Field-normalised: 138 Semantic Scholar citations place it in the top 5% of Materials Science papers from 2017 indexed by Semantic Scholar, by citation count.

| No. | Citing paper | Citing institution(s) | Country | S2 |
|---|---|---|---|---|
| 1 | Advanced metal matrix nanocomposites | Helmholtz-Zentrum Hereon, Isfahan University of Technology, Palacký University Olomouc | Czech Republic, France, Germany | **Influential** |

| No. | Citing paper | Citing institution(s) | Country | S2 |
|---|---|---|---|---|
| 2 | Magnesium-based nanocomposites for orthopedic applications: A review | Binzhou People's Hospital, Jilin International Studies University, Second Affiliated Hospital of Jilin University | China | — |
| 3 | Research progress on nanoparticles reinforced magnesium alloys | Jiangsu University of Science and Technology, Jilin University, University of Nottingham | China, United Kingdom | — |
| 4 | Manufacturing techniques for Mg-based metal matrix composite with different reinforcements | GLA University, Indian Institute of Technology Kanpur, Lovely Professional University | India, Iraq, Russia | — |
| 5 | Enhanced microstructures, mechanical properties, and machinability of high performance ADC12/SiC composites fabricated through the integration of a ... | Khon Kaen University, Prince of Songkla University | Thailand | — |
| 6 | Titanium particulate reinforced AZ31 magnesium matrix composites with improved ductility prepared using friction stir processing | Tsinghua University | China | — |
| 7 | Ultrasonic processing of lightweight alloys: A critical review | Toronto Metropolitan University | Canada | — |
| 8 | Magnesium based alloys and composites: Revolutionized biodegradable temporary implants and strategies to enhance their performance | National Institute of Technology Andhra Pradesh, Prince Mohammad Bin Abdulaziz University, Rajiv Gandhi University of Knowledge Technologies | India, Saudi Arabia | — |
| 9 | Development, characterization, and mechanical properties of innovative in-situ high-entropy alloy reinforced magnesium matrix composites via ultrasonic-assisted ... | Sardar Vallabhbhai National Institute of Technology Surat | India | — |
| 10 | Influence of SiC nanoparticle contents on microstructural evolution and mechanical behavior of AZ91D magnesium matrix composites synthesised through a ... | Khon Kaen University, University of Leicester | Thailand, United Kingdom | — |
| 11 | Metal matrix nanocomposites in tribology: Manufacturing, performance, and mechanisms | Jilin University, Max Planck Institutes for Intelligent Systems & Solid State Research Library, Nagoya University | China, Germany, Japan | — |
| 12 | Tribo-corrosive wear and mechanical properties of nanoparticles reinforced Mg-AZ91D composites | Anna University, Chennai, Nanjing University of Aeronautics and Astronautics, Opole University of Technology | China, India, Poland | — |
| 13 | Simultaneously improving the strength and ductility of AZ91/GNPs composites through decorating graphene nanoplatelets with MgO | Lanzhou University of Technology, Northwestern Polytechnical University | China | — |

| No. | Citing paper | Citing institution(s) | Country | S2 |
|---|---|---|---|---|
| 14 | SiC Blending Behaviour of Hybrid AZ31 Alloy Nanocomposite: Metallographic and Mechanical Studies | King Saud University, Kongunadu College of Engineering and Technology, Panimalar Engineering College | India, Saudi Arabia | — |
| 15 | A review on magnesium matrix composites for biomedical applications: materials, fabrication techniques, coatings, and applications | MIT World Peace University | India | — |
| 16 | Improvement of mechanical performance on zirconium dioxide nanoparticle synthesized magnesium alloy nano composite | Jain University, Jimma University, King Saud University | Australia, Ethiopia, India | — |
| 17 | Innovation in metal casting processes: A review of metal matrix nanocomposites in metal and bimetal castings | Central Metallurgical Research and Development Institute, University of Ha'il | Egypt, Saudi Arabia | — |
| 18 | Abrasive wear behavior of AZ31– B4C composites | Jadavpur University, National Institute of Technology Sikkim | India | — |
| 19 | Evaluation of mechanical, microstructural, tribological characteristics and cytocompatibility in AZ31 hybrid bio-composite reinforced with TiO2-HAp | GLA University, Lovely Professional University | India | — |
| 20 | Influence of machining parameters on wire electrical discharge machining performance of reduced graphene oxide/magnesium composite and its surface … | Anna University Regional Campus, Coimbatore, Karpagam Academy of Higher Education, Karunya University | India | — |
| 21 | Strength and ductility enhancement of AZ61/Al2O3/SiC hybrid composite by ECAP processing | Ariel University, National Taiwan University of Science and Technology | Israel, Taiwan | — |
| 22 | Investigating the influence of stir-ultrasonication-squeeze casting parameters on microstructure and mechanical performance of AA2014/nAl2O3 composites … | — | — | — |
| 23 | Recent progress and perspectives in additive manufacturing of magnesium alloys and composites: A review of process-microstructure-property correlations | — | — | — |
| 24 | Microstructure, mechanical and wear properties of AZ31/CoCrFeNi composites fabricated by friction stir processing | Xi'an University of Architecture and Technology | China | — |
| 25 | Experimental investigations on wear and friction behaviour of SiC@ r-GO reinforced Mg matrix composites produced through solvent-based powder … | Anna University Regional Campus, Coimbatore, Karunya University | India | — |
| 26 | Influence of hybrid reinforcements on the mechanical properties and morphology of AZ91 magnesium alloy composites synthesized by ultrasonic-assisted stir casting | National Institute of Technology Kurukshetra | India | — |

| No. | Citing paper | Citing institution(s) | Country | S2 |
|---|---|---|---|---|
| 27 | Influence of tool rotation speeds on mechanical and morphological properties of friction stir processed nano hybrid composite of MWCNT-Graphene-AZ31 ... | Graphic Era University, Punjabi University, Punjab Technical University | India | — |
| 28 | Coherent and semi-coherent interfaces induced high strength-plasticity compatibility of (Ti+ Al) p/AZ31 composites prepared by laser melt injection | Guangzhou University, Huazhong University of Science and Technology, Jinan University | China | — |
| 29 | Mechanical, biodegradability and biocompatibility behaviour of seashell and ZrO2 particulates reinforced AZ31 Mg composites | Alagappa Chettiar Government College of Engineering and Technology | India | — |
| 30 | Fabrication of AA2024– TiO2 nanocomposites through stir casting process | Isfahan University of Technology, Sahand University of Technology | Iran | — |

**Showing the 30 most-cited of 161 independent citing papers.**

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 |
|---|---|---|---|
| University of Illinois Urbana-Champaign | United States | QS =70 | 11 |
| Iran Polymer and Petrochemical Institute | Iran | SCImago #8216 | 11 |
| Jadavpur University | India | SCImago #7278 · THE 1001–1200 · QS =676 | 9 |
| Saveetha University | India | SCImago #2745 · THE 351–400 · QS 901-950 | 8 |
| Indian Institute of Technology Roorkee | India | SCImago #3065 · QS =339 | 8 |
| Chinese Academy of Sciences | China | SCImago #2 | 8 |
| Anna University, Chennai | India | — | 8 |
| The University of Texas at Austin | United States | THE 50 · QS 68 | 8 |
| Shenzhen University | China | SCImago #229 · THE 351–400 · QS =452 | 7 |
| Iran University of Science and Technology | Iran | SCImago #4556 · THE 401–500 · QS =496 | 7 |
| King Saud University | Saudi Arabia | SCImago #264 · THE 251–300 · QS 143 | 7 |
| Harbin Institute of Technology | China | SCImago #56 · THE =131 · QS 256 | 6 |
| Lovely Professional University | India | SCImago #2684 · THE 501–600 · QS 901-950 | 6 |
| Shanghai Jiao Tong University | China | SCImago #10 · THE 40 · QS =47 | 6 |

| Institution | Country | World ranking | Citing papers |
|---|---|---|---|
| Tsinghua University | China | SCImago #8 · THE 12 · QS =17 | 5 |

### Geographic distribution of citing authors

| Country | Citing papers |
|---|---|
| China | 148 |
| India | 131 |
| United States | 71 |
| Iran | 44 |
| Saudi Arabia | 18 |
| Germany | 16 |
| United Kingdom | 15 |
| Pakistan | 15 |
| South Korea | 14 |
| Poland | 13 |
| Russia | 12 |
| Australia | 10 |

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 | Self-rolled-up aluminum nitride-based 3D architectures enabled by record-high differential stress | 25 | 8 CFR 204.5(i)(3) — Outstanding Researcher |
| Contribution 2 | Phosphorene–the two-dimensional black phosphorous: properties, synthesis and applications | 296 | 8 CFR 204.5(i)(3) — Outstanding Researcher |
| Contribution 3 | Mechanical behavior of AZ31/Al2O3 magnesium alloy nanocomposites prepared using ultrasound assisted stir casting | 161 | 8 CFR 204.5(i)(3) — Outstanding Researcher |