Citation Evidence Report

EB-2 NIW Petition — National Interest Waiver

Matter of Dhanasar · Prong 2 (well-positioned)

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Google Scholar profile

Generated 2026-05-21 by CiteMap. This report organises Google Scholar citation data into the structure USCIS adjudicators apply to Prong 2 of Matter of Dhanasar (the petitioner is well positioned to advance the proposed endeavor) — the prong where past citation evidence is most probative. 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

751	989	46	22
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.

81.6% independent of 267 classified citing papers

Citation type	Count
Independent	218
Self-citation	3
Co-author	46
Same-institution	0

484 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 diversity-oriented synthetic strategy for cyclophanes using Fischer indolization and ring-closing metathesis, establishing substrate-controlled stereochemical outcomes and expanding the methodology to green chemistry applications.

The researcher established a foundational synthetic framework for cyclophanes through a 2015 core paper that combined Fischer indolization with ring-closing metathesis. This work specifically addressed the challenge of achieving substrate-controlled stereochemical outcomes in these complex macrocyclic structures, providing a reliable method for generating structural diversity.

This line of work appears to address the need for efficient, stereocontrolled routes to cyclophane derivatives. The originality lies in the strategic integration of indole formation with metathesis, a combination that allows for precise control over the final architecture. Subsequent publications by the same researcher in 2016 and 2021 suggest an evolution of this approach, extending it to phenanthroline-indole hybrids and incorporating green chemistry principles such as the use of tartaric acid and dimethyl urea.

The significance of this contribution is evidenced by the sustained interest in the core methodology. With 37 citations for the seminal paper and additional citations for follow-up works, the research has garnered attention from the broader scientific community. Notably, 81.6% of the citing papers originate from independent researchers, indicating that the synthetic strategies developed here have been adopted and utilized by external groups beyond the researcher's immediate circle.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 11

CORE PAPER

Diversity-oriented approach to cyclophanes via Fischer indolization and ring-closing metathesis: substrate-controlled stereochemical outcome in RCM

2015 · The Journal of Organic Chemistry 80 (18), 9141-9146, 2015 · 37 citations (GS)

No.	Citing paper	Citing institution(s)	Country	S2
1	Organic named reactions in green deep eutectic solvents (DESs)	—	—	—
2	Synthesis of phenanthrenes and 1-hydroxyphenanthrenes via aromatization-assisted ring-closing metathesis: Toward polynuclear aromatic hydrocarbons	—	—	—
3	Microwave-Assisted Rapid One-Pot Synthesis of Fused and Non-Fused Indoles and 5-[18F]Fluoroindoles from Phenylazocarboxylates	—	—	—
4	Design and Synthesis of Cyclic Mismatch-Binding Ligands (CMBLs) with Variable Linkers by Ring-Closing Metathesis and their Photophysical and DNA Repeat …	—	—	—

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

The double and triple role of l-(+)-tartaric acid and dimethyl urea: A prevailing green approach in organic synthesis

2021 · Current Organic Chemistry 25 (5), 554-579, 2021 · 19 citations (GS)

No.	Citing paper	Citing institution(s)	Country	S2
1	Organic named reactions in green deep eutectic solvents (DESs)	—	—	—
2	Unraveling the potential role of deep eutectic solvents (DESs): synthesis of ketazines & pyrazolines	—	—	—
3	One-Walled Phthalimide Extended Calix [4] Pyrrole-Based Supramolecular Adsorbent for Alleviating Nitrate From Simulated Water	—	—	—
4	Investigating the role of natural deep eutectic low melting mixtures for the synthesis of symmetrical bisamides	—	—	—
5	Probing and Evaluating the Anion Binding Effects in One-Walled meso-Phenylboronic Acid Appended Calix[4]pyrrole (C4P) Based Supramolecular Receptors	—	—	—
6	Synthesis of Pharmacologically Important Perimidines using Eco-Friendly Deep Eutectic Solvents	—	—	—
7	Multifunctional Deep Eutectic Solvent-Catalyzed Synthesis of Dihydropyrimidinethiones: A Sustainable Approach for Green and Efficient Reactions	—	—	—

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

Synthesis of Phenanthroline and Indole Based Hybrid Cyclophane Derivatives via Ring-Closing Metathesis

2016 · Heterocycles 93 (1), 399-405, 2016 · 8 citations (GS)

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

Contribution 2

Claim — Contribution 2

The researcher developed synthetic methodologies for complex propellane and macrocyclic architectures using ring-closing metathesis, establishing a foundational approach for constructing strained indole-based and indane-based frameworks.

The researcher established a methodological framework for synthesizing complex propellane derivatives, anchored by a 2013 core paper detailing the synthesis of indole-based propellanes via Weiss–Cook condensation, Fischer indole cyclization, and ring-closing metathesis. This work appears to address the challenge of constructing strained, bridged ring systems by integrating multiple key synthetic steps into a coherent strategy. The titles suggest a focus on overcoming structural complexity through specific cyclization techniques, providing a reproducible route to these difficult-to-access molecular scaffolds.

Originality in this line of work is indicated by the progression from the core indole-based system to related indane-based [n.3.3] propellanes in 2017 and hybrid macrocycles in 2015. The chronological development suggests the researcher expanded the initial methodology to diverse carbon frameworks, demonstrating the versatility of ring-closing metathesis in forming spiro

annulations and hybrid macrocycles on tricyclic diones. This evolution implies a systematic exploration of how metathesis can be applied to various congeners, broadening the scope of accessible propellane architectures beyond the initial indole derivatives.

The significance of this contribution is reflected in the citation metrics and the independence of the citing community. The 2015 follow-up paper on hybrid macrocycles has received 29 citations, while the core 2013 paper has 20 citations, indicating sustained interest in these synthetic strategies. Notably, 81.6% of the 267 classified citations for this scholar originate from independent researchers, suggesting that these methodologies have been adopted and utilized by the broader scientific community rather than being confined to the researcher's immediate circle. This high degree of independent uptake underscores the practical utility and impact of the developed synthetic routes in the field of organic chemistry.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 8

CORE PAPER

Synthesis of indole-based propellane derivatives via Weiss–Cook condensation, Fischer indole cyclization, and ring-closing metathesis as key steps

2013 · Beilstein journal of organic chemistry 9 (1), 2709-2714, 2013 · 20 citations (GS)

No.	Citing paper	Citing institution(s)	Country	S2
1	Organocatalytic tandem synthesis of chiral hexacyclic bisindoles from propargylic 3-methyleneindoles with 2-indolylmethanols	—	—	—
2	Synthesis of Oxa-aza-and Bis-oxathiaaza [3.3.3] propellanes from Dicyanomethylene-1, 3-indanedione and 2, 5-Dithiobiureas	—	—	—

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

Synthesis of indane-based [n. 3.3] propellane derivatives via ring-closing metathesis

2017 · Indian Journal of Chemistry 56, 1065-1069, 2017 · 4 citations (GS)

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

FOLLOW-UP WORK

Hybrid macrocycle formation and spiro annulation on cis-syn-cis-tricyclo [6.3. 0.02, 6] undeca-3, 11-dione and its congeners via ring-closing metathesis

2015 · Beilstein Journal of Organic Chemistry 11 (1), 1123-1128, 2015 · 29 citations (GS)

No.	Citing paper	Citing institution(s)	Country	S2
1	Organic named reactions in green deep eutectic solvents (DESs)	—	—	—
2	Applications of Oxone® in organic synthesis: an emerging green reagent of modern era	—	—	—
3	Metathesis reactions in natural product fragments and total syntheses	—	—	—
4	Unraveling the potential role of deep eutectic solvents (DESs): synthesis of ketazines & pyrazolines	—	—	—

No.	Citing paper	Citing institution(s)	Country	S2
5	RING-OPENING METATHESIS OF N-ALKENYL β-LACTAMS	—	—	—
6	An Expedient Route to Diaryl Tetrahydropentalenedione Derivatives via Intramolecular Pauson-Khand Carbonylative Cycloaddition-Oxidation Protocol	—	—	—

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 HFOX as a versatile precursor for synthesizing high-performance energetic 1,2,4-triazoles, enabling precise structural modifications through pH-controlled reactivity and trifluoromethyl substitution.

The researcher's core contribution centers on the 2020 paper identifying HFOX as a precursor for trifluoromethyl, dinitro, or trinitro-based energetic 1,2,4-triazoles. This work serves as the foundation for a focused line of inquiry into advanced energetic materials, leveraging specific chemical precursors to achieve desired energetic properties.

This line of work appears to address the need for controllable synthesis pathways in energetic chemistry. By introducing pH-controlled forms of HFOX in 2022, the researcher demonstrated selective reactivity of amine and hydrazinyl groups, suggesting a method to tailor molecular structures. The 2021 follow-up on trifluoromethyl-substituted derivatives further indicates an effort to optimize energetic properties through specific chemical substitutions, building directly on the initial precursor identification.

The significance of this contribution is evidenced by substantial independent uptake. The core paper has accumulated 38 citations, while the follow-up works have garnered 4 and 22 citations respectively. Notably, 81.6% of the 267 classified citations for this scholar originate from independent researchers, indicating that the broader scientific community recognizes and utilizes these synthetic strategies beyond the researcher's immediate circle.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 21

CORE PAPER

HFOX–1-amino-1-hydrazino-2, 2-dinitroethylene as a precursor to trifluoromethyl, dinitro, or trinitro-based energetic 1, 2, 4-triazoles

2020 · Organic letters 23 (1), 76-80, 2020 · 38 citations (GS)

No.	Citing paper	Citing institution(s)	Country	S2
1	Crystal Engineering Optimization through CF3 Functionalization: An Emerging Strategy for High-Density Energetic Materials	Ministry of Agriculture, School of Chemistry and Chemical Engineering, Zhejiang Dayang Biotechnology Group Co., Ltd.	China	—
2	Redefining 1, 3, 4-Oxadiazoles: Bridged Architectures for Balanced Energetic Performance	—	—	—
3	Raman and Synchrotron X-ray Diffraction Studies of Cd2(C2H6N6)4(NO3)·4H2O under High Pressures	Linyi University, University of Missouri, University of Science and Technology Liaoning	China, United States	—

No.	Citing paper	Citing institution(s)	Country	S2
4	Synthesis and Physicochemical Properties of Energetic 1, 2, 4, 5-Tetrazinyl Derivatives of 5-Nitro-2, 4-dihydro-1, 2, 4-triazol-3-one	Mendeleev University of Chemical Technology	Russia	—
5	Fluorine-Containing Functional Group-Based Energetic Materials	—	—	—
6	Single Step Synthesis of gem-Dinitro Methyl-1,2,4-triazole and Its Hydroxylamine Salt: An Alternative to the FOX-7 and Other Benchmark Explosives	—	—	—
7	Intramolecular Multifunctionalization in a Fused N-Rich Scaffold Produces a Record-Density CF3 Energetic	—	—	—
8	Trinitromethyl——A promising modifying group for energetic materials	North University of China	China	—
9	Huisgen Rearrangement as a Strategic Tool for Trifluoromethyl-Integrated Energetic Materials	—	—	—
10	High-pressure studies of Mn2(C2H6N6)4(NO3)4·2H2O by Raman scattering, infrared absorption, and synchrotron X-ray diffraction	—	—	—

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

pH-Controlled forms of 1-amino-1-hydrazino-2, 2-dinitroethylene (HFOX): selective reactivity of amine and hydrazinyl groups with aldehydes or ketones

2022 · Materials Advances 3 (10), 4289-4294, 2022 · 4 citations (GS)

No.	Citing paper	Citing institution(s)	Country	S2
1	Design and Synthesis of 3-Amino-4-azidoethoxyfurazan: A Supramolecular Energetic Material with Insensitivity Properties	Xi'an Modern Chemistry Research Institute	China	—
2	Facile synthesis of Bis (1, 2, 3-triazole) and 1, 1'-azobis-1, 2, 3-triazole via divergent one-step oxidation of glyoxal dihydrazone	—	—	—
3	Combination of energetic tetrazole and triazole: promising materials with exceptional stability and low mechanical sensitivity as propellants and gas generators	—	—	—

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

Synthesis and energetic properties of trifluoromethyl-substituted 2-nitro-[1, 2, 4] triazolo [1, 5-a] pyrimidine derivatives

2021 · Journal of Fluorine Chemistry 245, 109743, 2021 · 22 citations (GS)

No.	Citing paper	Citing institution(s)	Country	S2
1	Crystal Engineering Optimization through CF3 Functionalization: An Emerging Strategy for High-Density Energetic Materials	Ministry of Agriculture, School of Chemistry and Chemical Engineering, Zhejiang Dayang Biotechnology Group Co., Ltd.	China	—
2	Fluorine-Containing Functional Group-Based Energetic Materials	—	—	—
3	Highly Promising Primary Explosive: A Metal-Free, Fluoro-Substituted Azo-Triazole with Unmatched Safety and Performance	Indian Institute of Technology Kanpur	India	—
4	Unveiling Insensitive High-Nitrogen Energetic Materials: Fabrication of Pyrimidine via Bridging and Self-Assembly	—	—	—
5	Novel fluorine-containing energetic materials: how potential are they? A computational study of detonation performance	—	—	—
6	Exploring the Construction of a Fused-Ring Triazolopyrimidine Energetic Molecule	Nanjing University of Science and Technology	China	—
7	Synthesis and Properties of N1, N3-di (2,4-dinitrophenyl) –2-fluoro-1,3-diamino-4,6- Dinitrobenzene and its Analogues	—	—	—
8	Advancements in the Synthesis of Triazolopyrimidines	—	—	—

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
Nanjing University of Science and Technology	PR China	SCImago #541 · THE 601–800 · QS 701-710	23
Beijing Institute of Technology	People's Republic of China	SCImago #170 · THE 201–250 · QS =259	19
University of Idaho	United States	SCImago #3733 · QS 1001-1200	11
Northwestern Polytechnical University	China	SCImago #203 · THE 251–300 · QS =499	9
China Academy of Engineering Physics	PR China	SCImago #3380	7
National Institute of Technology Kurukshetra	India	SCImago #7750	7

Institution	Country	World ranking	Citing papers
Indian Institute of Technology Kanpur	India	SCImago #3001 · QS 222	6
Michigan State University	United States	SCImago #436 · THE =105 · QS 161	6
Xi'an Modern Chemistry Research Institute	China	SCImago #10005	5
Zhengzhou University	China	SCImago #101 · QS =618	5
N. D. Zelinsky Institute of Organic Chemistry, Russian Academy of Sciences	Russia	—	3
Indian Institute of Technology Roorkee	India	SCImago #3065 · QS =339	3
School of Chemistry and Chemical Engineering	—	—	3
Southwest University of Science and Technology	China	SCImago #2825	2
Central South University	PR China	SCImago #42 · THE 251–300 · QS =491	2

Geographic distribution of citing authors

Country	Citing papers
China	77
United States	14
India	12
Russia	6
Germany	5
PR China	4
South Korea	2
People's Republic of China	2
Israel	2
Italy	1
Australia	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

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).

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	Diversity-oriented approach to cyclophanes via Fischer indolization and ring-closing metathesis: substrate-controlled stereochemical outcome in RCM	11	Dhanasar — Prong 2 (well-positioned)
Contribution 2	Synthesis of indole-based propellane derivatives via Weiss–Cook condensation, Fischer indole cyclization, and ring-closing metathesis as key steps	8	Dhanasar — Prong 2 (well-positioned)
Contribution 3	HFOX–1-amino-1-hydrazino-2, 2-dinitroethylene as a precursor to trifluoromethyl, dinitro, or trinitro-based energetic 1, 2, 4-triazoles	21	Dhanasar — Prong 2 (well-positioned)