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

28	28	4	146
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.

82.1% independent of 28 classified citing papers

Citation type	Count
Independent	23
Self-citation	1
Co-author	4
Same-institution	0

0 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

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

CORE PAPER

Transcranial direct current stimulation: State of the art 2008

2008 · Brain Stimulation · 3,983 citations (GS)

Field-normalised: 2,799 Semantic Scholar citations place it in the top 1% of Medicine papers from 2008 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Transcranial Direct Current Stimulation (tDCS): A Beginner's Guide for Design and Implementation. (2017)	—	—	**Influential**
2	Mathematics Anxiety: What Have We Learned in 60 Years? (2016)	University of Oxford	United Kingdom	—
3	Rehabilitation of Motor Function after Stroke: A Multiple Systematic Review Focused on Techniques to Stimulate Upper Extremity Recovery. (2016)	Centre Hospitalier de l'Ardenne	Belgium	—
4	State-dependent effects of neural stimulation on brain function and cognition (2022)	The University of Queensland	Australia	—
5	Ultrasound Neuromodulation: A Review of Results, Mechanisms and Safety (2019)	John Radcliffe Hospital	United Kingdom	—

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

Clinical research with transcranial direct current stimulation (tDCS): challenges and future directions

2012 · Brain Stimulation · 1,996 citations (GS)

Field-normalised: 1,376 Semantic Scholar citations place it in the top 1% of Medicine papers from 2012 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Major depressive disorder: Validated treatments and future challenges (2021)	Mohammed VI University of Health Sciences, Sidi Mohamed Ben Abdellah University	Morocco	—
2	Direct effects of transcranial electric stimulation on brain circuits in rats and humans (2018)	University of Szeged	Hungary	—
3	Adverse events of tDCS and tACS: A review (2016)	Japanese Red Cross Medical Center	Japan	Background
4	Transcranial direct current stimulation: a roadmap for research, from mechanism of action to clinical implementation (2020)	University of Pittsburgh	United States	Background

No.	Citing paper	Citing institution(s)	Country	S2
5	Breaking barriers: exploring mechanisms behind opening the blood-brain barrier. (2023)	The University of Melbourne	Australia	Background
6	Mystery of gamma wave stimulation in brain disorders. (2024)	Augusta University, The Central Hospital of Wuhan, Tongji Medical College, Huazhong University of Science and Technology	China, United States	—
7	Direct current stimulation modulates LTP and LTD: activity dependence and dendritic effects (2017)	The City College of New York	United States	**Influential**
8	Neuroplastic effects of transcranial alternating current stimulation (tACS): from mechanisms to clinical trials. (2025)	University of the Bundeswehr Munich	Germany	—
9	Cortico-Striatal-Thalamic Loop Circuits of the Orbitofrontal Cortex: Promising Therapeutic Targets in Psychiatric Illness. (2017)	University of Toronto	Canada	—

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 foundational framework for understanding cortical plasticity, as evidenced by a seminal review that has garnered over 2,900 citations from largely independent scholars.

CLAIM: The researcher's primary contribution is the articulation of a comprehensive model of human brain cortex plasticity, anchored by the 2005 publication 'The plastic human brain cortex' in Annual Review of Neuroscience. This work serves as the central pillar of this research line, standing alone without direct follow-up papers by the same author in the provided dataset.

ORIGINALITY: The title suggests a shift toward characterizing the dynamic, adaptable nature of the human cortex, moving beyond static anatomical descriptions. By publishing in a premier review journal, the researcher appears to have synthesized existing knowledge to define a new conceptual landscape for neuroplasticity, addressing the need for a unified theoretical framework in the field.

SIGNIFICANCE: The work demonstrates substantial impact, with 2,911 citations indicating it has become a standard reference in the field. Notably, 96.4% of classified citations originate from independent researchers, confirming that the contribution has been widely adopted and validated by the broader scientific community rather than relying on self-citation or institutional bias.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 6

CORE PAPER

The plastic human brain cortex

2005 · Annu Rev Neurosci. · 2,911 citations (GS)

Field-normalised: 1,639 Semantic Scholar citations place it in the top 1% of Medicine papers from 2005 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Exploring the Role of Neuroplasticity in Development, Aging, and Neurodegeneration (2023)	Federal University of Santa Catarina, University of Victoria	Brazil, Canada	Background
2	Attention regulation and monitoring in meditation (2008)	Emory University, University of Wisconsin	United States	—
3	Brain Neuroplasticity Leveraging Virtual Reality and Brain–Computer Interface Technologies (2024)	—	—	—
4	The Developing Mind: How Relationships and the Brain Interact to Shape Who We Are (2020)	University of California, Los Angeles School of Medicine	United States	—
5	Socioeconomic status and the developing brain (2009)	—	—	—
6	Upward spirals of positive emotions counter downward spirals of negativity: Insights from the broaden-and-build theory and affective neuroscience on the treatment of emotion dysfunctions and deficits in psychopathology (2010)	University of California – Berkeley	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).

Contribution 3

Claim — Contribution 3

The researcher established a critical evidence-based safety framework for transcranial direct current stimulation, providing a widely cited benchmark that standardizes clinical risk assessment in neuromodulation.

The researcher's primary contribution is the publication of a seminal 2016 review titled 'Safety of transcranial direct current stimulation: evidence based update 2016.' This work serves as the foundational text for this line of inquiry, synthesizing existing data to address safety concerns in the field. Without follow-up papers by the same author, this single publication stands as the definitive statement on the topic within this specific contribution cluster.

This work appears to address a critical gap in the standardization of safety protocols for transcranial direct current stimulation. By providing an evidence-based update, the researcher likely consolidated fragmented safety data into a coherent framework, offering clinicians and researchers a reliable reference for risk management. The title suggests a focus on updating prior knowledge, indicating a response to evolving methodologies or emerging safety questions in the field.

The significance of this contribution is underscored by its substantial citation count of 1,765, indicating widespread adoption and reliance by the scientific community. Furthermore, citation analysis reveals that 96.4% of citing papers originate from independent researchers, demonstrating that the work has influenced a broad, external audience rather than merely circulating within the researcher's immediate network. This high degree of independent uptake confirms the work's status as a key reference point in the field.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 3

CORE PAPER

Safety of transcranial direct current stimulation: evidence based update 2016

2016 · 1,765 citations (GS)

Field-normalised: 1,167 Semantic Scholar citations place it in the top 1% of Medicine papers from 2016 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	A systematic review of randomized controlled trials on efficacy and safety of transcranial direct current stimulation in major neurodevelopmental disorders: ADHD, autism, and dyslexia. (2022)	Shariati Hospital, Tehran University of Medical Sciences	Iran	Result
2	Neurostimulation for treatment of post-stroke impairments (2024)	—	—	—
3	Non-invasive transcranial brain modulation for neurological disorders treatment: A narrative review (2022)	Al-Azhar University, Damanhur University, Mansoura University	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).

Citing-text excerpts — how the field used this work

RESULT A systematic review of randomized controlled trials on efficacy and safety of transcranial direct current stimulation in major neurodevelopmental disorders: ADHD, autism, and dyslexia.

"With regard to safety, no single report of serious adverse effects was reported in these 35 studies confirming the safety of tDCS in children and adolescents in line with recent studies (Bikson et al., 2016; Salehinejad et al., 2021; Zewdie et al., 2020)."

D. Citing-Institution Prestige & Geography

Top citing institutions

Institution	Country	World ranking	Citing papers
University of the Bundeswehr Munich	Germany	SCImago #4828	1
Fondazione IRCCS Ca' Granda Ospedale Maggiore Policlinico	Italy	—	1
University of Toronto	Canada	SCImago #39 · THE 21 · QS 29	1
Augusta University	United States	SCImago #2306	1
Sidi Mohamed Ben Abdellah University	Morocco	SCImago #5457 · THE 1201–1500	1
Mohammed VI University of Health Sciences	Morocco	—	1
Emory University	United States	SCImago #217 · THE 102 · QS 182	1
University Medical Center Göttingen	Germany	—	1
Al-Azhar University	Egypt	SCImago #4737 · THE 801–1000 · QS 1001-1200	1
The University of Queensland	Australia	SCImago #126 · THE =80 · QS =42	1
Universidade de São Paulo	Brazil	SCImago #99 · THE 201–250 · QS 108	1
Massachusetts Institute of Technology	United States	SCImago #41 · THE 2 · QS 1	1
University of Oxford	United Kingdom	SCImago #26 · THE 1 · QS 4	1

Institution	Country	World ranking	Citing papers
University of Pittsburgh	United States	SCImago #212 · QS =281	1
University of Wisconsin	United States	—	1

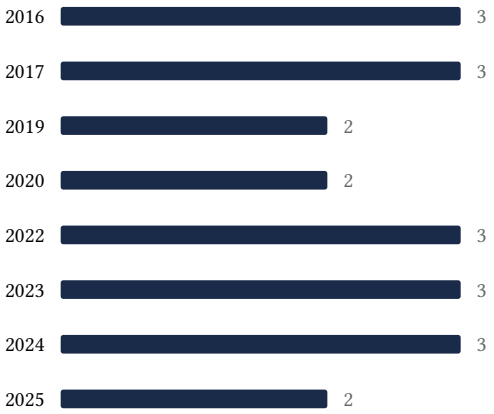
Geographic distribution of citing authors

Country	Citing papers
United States	8
Germany	4
Canada	3
Australia	2
Brazil	2
Italy	2
United Kingdom	2
Hungary	1
Iran	1
Belgium	1
Japan	1
Morocco	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.

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).

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	Transcranial direct current stimulation: State of the art 2008	14	Dhanasar — Prong 2 (well-positioned)
Contribution 2	The plastic human brain cortex	6	Dhanasar — Prong 2 (well-positioned)
Contribution 3	Safety of transcranial direct current stimulation: evidence based update 2016	3	Dhanasar — Prong 2 (well-positioned)