Citation Evidence Report

EB-2 NIW Petition — National Interest Waiver

Matter of Dhanasar · Prong 2 (well-positioned)

Satria Zulkarnaen Bisri

Tokyo University of Agriculture and Technology

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

3,357	4,638	165	32
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.

91.5% independent of 1,702 classified citing papers

Citation type	Count
Independent	1,557
Self-citation	28
Co-author	117
Same-institution	0

1,655 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 high-current organic single-crystal transistors, establishing a foundational trajectory toward ion-controlled electronics and ambipolar semiconductor materials.

The researcher's contribution centers on advancing organic electronic devices, anchored by the 2008 paper on high current density in light-emitting transistors of organic single crystals. This core work appears to have initiated a sustained research line exploring the fundamental limits and applications of organic semiconductors.

This trajectory suggests an original effort to bridge fundamental device physics with emerging material classes. The progression from specific transistor performance metrics in 2008 to broader outlooks on ambipolar semiconductors in 2014 and iontronics in 2017 indicates a strategic expansion from component-level optimization to systemic electronic paradigms.

The significance of this work is evidenced by substantial citation activity, with the core paper accumulating 252 citations and follow-up works reaching 287 and 625 citations respectively. Notably, 91.7% of the 1701 classified citations originate from independent researchers, demonstrating that this line of inquiry has been widely adopted and validated by the broader scientific community beyond the researcher's immediate circle.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 569 · **3 flagged influential by Semantic Scholar**

CORE PAPER

High current density in light-emitting transistors of organic single crystals

2008 · Physical Review Letters 100 (6), 066601, 2008 · 252 citations (GS)

Field-normalised: 203 Semantic Scholar citations place it in the top 5% of Physics papers from 2008 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Recent advances in ambipolar transistors for functional applications	Institute for Advanced Study, Shenzhen University	China, United States	—
2	Recent developments and novel applications of thin film, light-emitting transistors	Universität Heidelberg	Germany	—
3	Light sources with bias tunable spectrum based on van der Waals interface transistors	University of Geneva	Switzerland	—
4	Organic semiconductor crystals	Chinese Academy of Sciences, Huazhong University of Science and Technology, Tianjin University	China	—
5	Organic semiconductor single crystals for electronics and photonics	Chinese Academy of Sciences, Tianjin University	China	—
6	Organic light-emitting transistors entering a new development stage	Chinese Academy of Sciences, Tianjin University	China	—
7	Organic light-emitting transistors with an efficiency that outperforms the equivalent light-emitting diodes	Consiglio Nazionale delle Ricerche	Italy	—
8	Functional organic field-effect transistors	Chinese Academy of Sciences	China	—
9	Recent advances in solid-state organic lasers	Université Paris 13	France	Background
10	Organic light-emitting field-effect transistors: device geometries and fabrication techniques	Nanjing Tech University, Nanjing University of Posts & Telecommunications	China	—

No.	Citing paper	Citing institution(s)	Country	S2
11	Toward nonepitaxial laser diodes	Clemson University, Ewha Womans University, Princeton University	South Korea, United States	—
12	Functional organic single crystals for solid-state laser applications	Jilin University, Kyoto Institute of Technology	China, Japan	—
13	Efficient and low-voltage vertical organic permeable base light-emitting transistors	Northwestern Polytechnical University	China	—
14	Organic Semiconductor Single-Crystal Light-Emitting Transistors	Chinese Academy of Sciences, Tianjin University	China	—
15	Clarification of the Molecular Doping Mechanism in Organic Single-Crystalline Semiconductors and their Application in Color-Tunable Light-Emitting Devices	Chongqing University, Jilin University, Kyoto Institute of Technology	China, Japan	—
16	Organic Single-Crystalline Semiconductors for Light-Emitting Applications: Recent Advances and Developments	Jilin University	China	—
17	Highly Efficient Three Primary Color Organic Single-Crystal Light-Emitting Devices with Balanced Carrier Injection and Transport	Jilin University, Kyoto Institute of Technology	China, Japan	—
18	Efficient organic light-emitting transistors based on high-quality ambipolar single crystals	South China University of Technology, The University of Arizona	China, United States	—
19	Whispering-gallery mode lasing from patterned molecular single-crystalline microcavity array	Chinese Academy of Sciences, Jilin University	China	—
20	Single crystal biphenyl end-capped furan-incorporated oligomers: influence of unusual packing structure on carrier mobility and luminescence	Tohoku University	Japan	—
21	A new electrode design for ambipolar injection in organic semiconductors	Tohoku University	Japan	—
22	Organic light-emitting transistors: from understanding to molecular design and architecture	Central University of Tamil Nadu	India	—
23	Polymorphism and Amplified Spontaneous Emission in a Dicyano-Distyrylbenzene Derivative with Multiple Trifluoromethyl Substituents: Intermolecular Interactions in …	Graz University of Technology, Madrid Institute for Advanced Studies IMDEA Nanoscience, Seoul National University	Austria, South Korea, Spain	—
24	Organic crystals: properties, devices, functionalization and bridges to bio-molecules	—	—	—
25	Utilizing carbon nanotube electrodes to improve charge injection and transport in bis (trifluoromethyl)-dimethyl-rubrene ambipolar single crystal transistors	Northwestern University, University of Minnesota	United States	—

No.	Citing paper	Citing institution(s)	Country	S2
26	Molecular materials that can both emit light and conduct charges: strategies and perspectives	Chinese Academy of Sciences	China	—
27	Theoretical analysis on the optoelectronic properties of single crystals of thiophene-furan-phenylene co-oligomers: Efficient photoluminescence due to molecular …	Tohoku University	Japan	—
28	Separation in the roles of carrier transport and light emission in light-emitting organic transistors with a bilayer configuration	Tohoku University	Japan	—
29	Enhanced phosphorescence in dibenzophosphole chalcogenide mixed crystal	Bowling Green State University, University of Texas at Austin	United States	—
30	Preparation, optical property and field-effect mobility investigation of stable white-emissive doped organic crystal	Jilin University, Northeast Petroleum University, South China University of Technology	China, Japan	—

Showing the 30 most-cited of 86 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).

FOLLOW-UP WORK

Endeavor of iontronics: from fundamentals to applications of ion-controlled electronics

2017 · Advanced Materials 29 (25), 1607054, 2017 · 625 citations (GS)

Field-normalised: 471 Semantic Scholar citations place it in the top 1% of Physics papers from 2017 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Age of flexible electronics: emerging trends in soft multifunctional sensors	Khalifa University, Pohang University of Science and Technology	South Korea, United Arab Emirates	—
2	Carbon nanotube chemical sensors	Massachusetts Institute of Technology	United States	—
3	Ionic gating for tuning electronic and magnetic properties	Max Planck Institute of Microstructure Physics	Germany	—
4	The Jeff = 1/2 Antiferromagnet Sr2IrO4: A Golden Avenue toward New Physics and Functions	Huazhong University of Science and Technology, Nanjing University	China	—
5	LaAlO3/SrTiO3 Heterointerface: 20 Years and Beyond	Anhui University, Institute of Materials Research and Engineering, National University of Singapore	China, Hong Kong, Singapore	—
6	Dielectrics for two-dimensional transition-metal dichalcogenide applications	Institute of Materials Research and Engineering	Singapore	—

No.	Citing paper	Citing institution(s)	Country	S2
7	Dynamic field modulation of the octahedral framework in metal oxide heterostructures	Argonne National Laboratory, University of Science and Technology of China	China, United States	—
8	Artificial neuron devices	Nanyang Technological University	Singapore	—
9	Flexible iontronic sensing	Shandong University	China	—
10	Nanofluidic ionic memristors	Southern University of Science and Technology	China	—
11	A ferrite synaptic transistor with topotactic transformation	Capital Normal University, Chinese Academy of Sciences, Institute of Physics, Chinese Academy of Sciences	China	—
12	Ionogels: preparation, properties and applications	Donghua University, Soochow University	China	—
13	Hydrogel ionotronics	Harvard University	United States	—
14	Hydrogel adhesion: a supramolecular synergy of chemistry, topology, and mechanics	Harvard University	United States	—
15	Reconfigurable optoelectronic transistors for multimodal recognition	Chinese Academy of Sciences, Institute of Physics, Chinese Academy of Sciences	China	Influential
16	Electrolyte-gated transistors for enhanced performance bioelectronics	University of Brescia	Italy	—
17	A bionic self-driven retinomorphic eye with ionogel photosynaptic retina	Nanjing Tech University	China	—
18	Electrostatic gating and intercalation in 2D materials	Stanford University	United States	—
19	Recent progress on flexible capacitive pressure sensors: From design and materials to applications	International Institute of Information Technology (IIIT) Hyderabad, King Abdullah University of Science and Technology (KAUST)	India, Saudi Arabia	—
20	Highly stretchable, elastic, and ionic conductive hydrogel for artificial soft electronics	Nanjing University of Aeronautics and Astronautics, Nanyang Technological University, Wuhan Textile University	China, Singapore	—
21	Recent advances in transistor-based artificial synapses	Putuo District People's Hospital, Tongji University	China	—
22	Wearable blood pressure sensors for cardiovascular monitoring and machine learning algorithms for blood pressure estimation	Korea Advanced Institute of Science and Technology, Korea Advanced Institute of Science and Technology (KAIST), Korea Research Institute of Standards and Science	South Korea, United States	—
23	First decade of interfacial iontronic sensing: from droplet sensors to artificial skins	Beihang University, Shandong University, Southern Univer-	China, United States	—

No.	Citing paper	Citing institution(s)	Country	S2
		sity of Science and Technology		
24	Flexible iontronic sensing: ionic materials, electrodes, and encapsulation	Southern University of Science and Technology	China	—
25	Covalent organic frameworks: linkage chemistry and its critical role in the evolution of π electronic structures and functions	Hainan University, National University of Singapore	China, Singapore	—
26	Ionic flexible sensors: mechanisms, materials, structures, and applications	Hohai University, Southern University of Science and Technology, Swansea University	China, United Kingdom	—
27	Optoelectronic synaptic devices for neuromorphic computing	Zhejiang University	China	—
28	Ionic conductive textiles for wearable technology	The Hong Kong Polytechnic University	China	—
29	Layered intercalation materials	Hunan University, King Saud University, University of California, Los Angeles	China, Saudi Arabia, United States	—
30	Vertical iontronic energy storage based on osmotic effects and electrode redox reactions	Chinese Academy of Sciences	China	—

Showing the 30 most-cited of 341 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).

FOLLOW-UP WORK

Outlook and emerging semiconducting materials for ambipolar transistors

2014 · Advanced materials 26 (8), 1176-1199, 2014 · 287 citations (GS)

Field-normalised: 223 Semantic Scholar citations place it in the top 5% of Materials Science papers from 2014 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Recent advances in ambipolar transistors for functional applications	Institute for Advanced Study, Shenzhen University	China, United States	—
2	Polymer-wrapped carbon nanotubes for high performance field effect transistors	—	—	—
3	Optical waveguides based on one-dimensional organic crystals	Soochow University	People's Republic of China	—
4	Organic light-emitting transistors: materials, device configurations, and operations	Tianjin University	China	—
5	Two-dimensional organic semiconductor crystals for photonics applications	Soochow University	China, People's Republic of China	—
6	Clarification of the Molecular Doping Mechanism in Organic Single-Crystalline Semiconductors and their Application in Color-Tunable Light-Emitting Devices	Chongqing University, Jilin University, Kyoto Institute of Technology	China, Japan	—

No.	Citing paper	Citing institution(s)	Country	S2
7	Organic Single-Crystalline Semiconductors for Light-Emitting Applications: Recent Advances and Developments	Jilin University	China	—
8	Quinoidal molecules as a new class of ambipolar semiconductor originating from amphoteric redox behavior	Dongguk University, Gwangju Institute of Science and Technology, Imperial College London	South Korea, United Kingdom	—
9	2D Molecular Crystal Bilayer p–n Junctions: A General Route toward High-Performance and Well-Balanced Ambipolar Organic Field-Effect Transistors	Tianjin University	China	—
10	Molecular materials that can both emit light and conduct charges: strategies and perspectives	Chinese Academy of Sciences	China	—
11	Ambipolar organic field-effect transistors based on solution-processed single crystal microwires of a quinoidal oligothiophene derivative	Kyushu University	Japan	—
12	Enhanced ambipolar charge transport for efficient organic single crystal light-emitting transistors with a narrowed ambipolar regime	Chinese Academy of Sciences	China	—
13	Comparative study of single and dual gain-narrowed emission in thiophene/furan/phenylene co-oligomer single crystals	Tohoku University	Japan	—
14	Organic optoelectronic materials: mechanisms and applications	Oregon State University	United States	—
15	Lead iodide perovskite light-emitting field-effect transistor	Istituto Italiano di Tecnologia, Nanyang Technological University	Italy, Singapore	—
16	Ambipolar solution-processed hybrid perovskite phototransistors	King Abdullah University of Science and Technology	Kingdom of Saudi Arabia	—
17	Ambipolar blend-based organic electrochemical transistors and inverters	Technion – Israel Institute of Technology	Israel	—
18	Molecular semiconductors for logic operations: dead-end or bright future?	Université Libre de Bruxelles	Belgium	—
19	High-Performance, Single-Component Ambipolar Organic Electrochemical Transistors with Balanced n/p-Type Properties for Inverter and Biosensor Applications	Xi'an Jiaotong University, Xi'an University of Science and Technology	China	—
20	Boosting bidirectional photoresponse with wavelength selectivity through ambipolar transport modulation	Changchun Institute of Applied Chemistry Chinese Academy of Sciences, Soochow University	China	—
21	1D and 2D field effect transistors in gas sensing: A comprehensive review	University of Pisa	Italy	—
22	Controlled Growth and Thickness-Dependent Conduction-Type Transition of 2D Ferrimagnetic Cr2S3 Semiconductors	National University of Singapore, Peking University	China, Singapore	—
23	All-polymer solar cell performance optimized via systematic molecular weight tuning of both donor and acceptor polymers	Argonne National Laboratory, Polyera Corporation, Yale University	United States	—

No.	Citing paper	Citing institution(s)	Country	S2
24	Organic Heterojunction Phototransistors with Bi-Directional Photoresponse for Vision Biomimetics	Central South University	China	—
25	Circularly polarized electroluminescence from a single-crystal organic microcavity light-emitting diode based on photonic spin-orbit interactions	Capital Normal University, Tianjin University, Universität Paderborn	China, Germany, Germany; USA	—
26	2D ternary chalcogenides	Huazhong University of Science and Technology	China	—
27	Low-Dimensional Organic Semiconductor Single-Crystal Heterojunctions for Next-Generation Optoelectronic Devices	China Electronics Technology Group Corp 46th Research Institute, Jilin University, Tianjin University	China	—
28	Ultrahigh and broad spectral photodetectivity of an organic–inorganic hybrid phototransistor for flexible electronics	University of California, Los Angeles	United States	—
29	Single-component CMOS-like logic using diketopyrrolopyrrole-based ambipolar organic electrochemical transistors	Indian Institute of Science	India	—
30	Achieving unipolar organic transistors for complementary circuits by selective usage of doped organic semiconductor film electrodes	Chinese Academy of Sciences, Hunan University, National University of Defense Technology	China	—

Showing the 30 most-cited of 142 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 2

Claim — Contribution 2

The researcher advanced carbon-based quantum dot supercapacitor technology through a seminal review and subsequent experimental and theoretical studies on hierarchical structures and defect engineering.

The researcher established a foundational contribution to energy storage by publishing a highly cited 2021 review on carbon-based quantum dots for supercapacitors. This core work, which has accumulated 221 citations, appears to have defined the state of the art and identified critical future challenges in the field.

Building on this foundation, the researcher pursued specific technical innovations in subsequent years. The titles of follow-up papers suggest a focus on enhancing device performance through structural and material modifications. Specifically, the researcher investigated additive-free hierarchical nanopore structures to achieve high volumetric energy density and employed first-principles calculations to explore defect engineering in iron sulfide systems for improved quantum capacitance.

The significance of this line of work is evidenced by its substantial uptake within the scientific community. With 221 citations for the core paper and additional citations for the follow-up studies, the research has clearly influenced peer work. Notably, 91.7% of the citing papers originate from independent researchers, indicating that the contributions have resonated beyond the researcher's immediate circle and have been adopted by the broader field.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 69 **· 1 flagged influential by Semantic Scholar**

CORE PAPER

Carbon-based quantum dots for supercapacitors: Recent advances and future challenges

2021 · Nanomaterials 11 (1), 91, 2021 · 221 citations (GS)

Field-normalised: 155 Semantic Scholar citations place it in the top 5% of Materials Science papers from 2021 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Carbon quantum dots for energy applications: a review	Monash University, National Taitung University, National Taiwan University of Science and Technology	Australia, Taiwan	—
2	Recent advances on synthesis and potential applications of carbon quantum dots	—	—	—
3	A review on development of carbon-based nanomaterials for energy storage devices: opportunities and challenges	Aligarh Muslim University, Indian Institute of Technology Delhi, Yeungnam University	India, South Korea	—
4	Doping and surface modification of carbon quantum dots for enhanced functionalities and related applications	Christ (Deemed to be University)	India	—
5	Engineering functionalization and properties of graphene quantum dots (GQDs) with controllable synthesis for energy and display applications	Seoul National University	South Korea	—
6	Ultrafast shaped laser induced synthesis of MXene quantum dots/graphene for transparent supercapacitors	Beijing Institute of Technology, Tsinghua University	China	—
7	Revolutionizing micro-scale energy storage by 0D carbon nanostructures: synthesis, integration, performance optimization mechanisms and sustainable applications	Beijing Institute of Technology, Clarkson University, COMSATS University Islamabad	Australia, China, Japan	—
8	Recent advances in energy storage with graphene oxide for supercapacitor technology	King Abdulaziz University, National Taiwan University of Science and Technology, Shiraz University	Canada, Iran, Saudi Arabia	—
9	Green synthesis of zero-dimensional carbon nanostructures in energy storage applications—a review	Indian Institute of Science Education and Research Thiruvananthapuram, T.M.Jacob Memorial Government College	India	Influential
10	Zero-Dimensional carbon nanomaterials for electrochemical energy storage	University of Bialystok	Poland	—
11	Stimuli-responsive smart materials enabled high-performance biosensors for liquid biopsies	Soochow University, University of New South Wales, University of Southampton	Australia, China, United Kingdom	—
12	Flexible supercapacitors and Solid-State electrolytes: A perspective on the key to flexibility	BMS College of Engineering, Christ University, Mangalore University	India	—

No.	Citing paper	Citing institution(s)	Country	S2
13	Photorechargeable carbon dot/thermoresponsive polymer supercapacitor	Ben Gurion University of the Negev, Technische Universität Dresden	Germany, Israel	—
14	A comprehensive review on multi-colored emissive carbon dots as fluorescent probes for the detection of pharmaceutical drugs in water	Vellore Institute of Technology	India	—
15	Exploring the potential of eco-friendly carbon dots in monitoring and remediation of environmental pollutants	Dr B R Ambedkar National Institute of Technology	India	—
16	State of the art recent advances and perspectives in 2D MXene-based microwave absorbing materials: a review	Tongji University, University Politehnica of Bucharest	China, Romania	—
17	Unlocking the full potential of citric acid-synthesized carbon dots as a supercapacitor electrode material via surface functionalization	Sabanci University	Turkey	—
18	Carbon dots from natural sources for biomedical applications	Christ (Deemed to be University), Cochin University of Science and Technology	India	—
19	Electrochemical and impedance analysis of carbon based MnO2 composite nanomaterials for supercapacitor electrodes	International Islamic University, Rawalpindi Women University, University of Peshawar	Pakistan	—
20	Facile synthesis of FeS@MoS2 nanocomposite material: an advantageous electrode for high-performance supercapacitor	A'Sharqiyah University, Kunming University of Science and Technology, Princess Nourah bint Abdulrahman University	China, Saudi Arabia, Sultanate of Oman	—
21	Uniform blue emitting carbon nanodots synthesized from fig fruit using reverse diffusion purification	King Abdulaziz University, King Abdullah University of Science and Technology, Ministry of Health	Saudi Arabia, United States	—
22	Enhancing supercapacitor performance using carbon dots as versatile additives in both titanium dioxide-based electrodes and sodium sulfate electrolytes	Korea National University of Transportation, National Nanotechnology Center (NANOTEC), National Science and Technology Development Agency (NSTDA), Thammasat University	South Korea, Thailand	—
23	Red Carbon Dots Sensitized Ni-Doped 2D MoS2 Nanosheets as Electrode Materials for Visible-Light Active Photorechargeable Supercapacitors	Indian Institute of Science Education and Research (IISER) Berhampur	India	—
24	Acidic groups functionalized carbon dots capping channels of a proton conductive metal–organic framework by coordination bonds to improve the water-retention …	California State University, Los Angeles, Nanjing Tech University	China, United States	—

No.	Citing paper	Citing institution(s)	Country	S2
25	Ultrasensitive optical detection of Fe3+ ions using fluorescent carbon quantum dots derived from Simmondsia Chinensis Jojoba leaves	Egypt-Japan University of Science and Technology	Egypt	—
26	In Situ Growth of Carbon Dots on Acid-Modified Nanoclay for Advanced Mos2 Composite-Based Asymmetric Supercapacitor	Gachon University, Indian Institute of Technology (ISM)	India, South Korea	—
27	Investigation of zirconium disulphide quantum dots for supercapacitor applications	Anna University	India	—
28	Rational Integration of ZIF-8 and BiPO4 for Energy Storage and Environmental Applications	Erciyes University, Kayseri University	Turkey	—
29	Nanoscopic Wonders: Carbon Quantum Dots as Catalysts and Charge Carriers in Advanced Energy Storage Systems	Kunming University of Science and Technology, M.M. Engineering College Maharishi Markandeshwar (Deemed to be University)	China, India	—
30	A mini review on the role of carbon dots for supercapacitor application	Graphic Era (Deemed to be University)	India	—

Showing the 30 most-cited of 63 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).

FOLLOW-UP WORK

High volumetric energy density supercapacitor of additive-free quantum dot hierarchical nanopore structure

2024 · ACS Applied Materials & Interfaces 16 (19), 24889-24898, 2024 · 14 citations (GS)

No.	Citing paper	Citing institution(s)	Country	S2
1	Two-Dimensional Porphyrin-Based Covalent Organic Frameworks/gC3N4 Composites as High-Performance Supercapacitor	Indian Institute of Technology Indore	India	—
2	Pushing the Limits: Hydrothermally Synthesized Bi2MnCoO6 Electrodes with Exceptional Cyclability for Asymmetric Supercapacitors	Indian Institute of Technology Roorkee, National University of Singapore	India, Singapore	—
3	Energy-Efficient Synthesis of ZnMn2O4 Nanoparticles Decorated on Exfoliated Graphite Sheets for High-Performance Asymmetric Supercapacitor	—	—	—
4	Anthracene-Functionalized Carbon Dots for High-Performance All-Organic Symmetric Supercapacitors	—	—	—

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

Enhancing quantum capacitance of iron sulfide supercapacitor through defect-engineering: A first-principles calculation

2023 · Electrochimica Acta 449, 142235, 2023 · 17 citations (GS)

No.	Citing paper	Citing institution(s)	Country	S2
1	Quantum capacitance of two-dimensional-material-based supercapacitor electrodes	Indian Institute of Science, Motilal Nehru National Institute of Technology Allahabad, Politecnico de Milano	Australia, India, Italy	—
2	Dopant-induced defect engineering in transition metal oxide/chalcogenide-based electrodes for high-performance supercapacitors: a critical review	—	—	—

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
Chinese Academy of Sciences	China	SCImago #2	102
University of Groningen	Netherlands	SCImago #232 · THE 82 · QS =147	72
Tianjin University	P. R. China	SCImago #90 · THE 201–250 · QS =257	62
Jilin University	PR China	SCImago #117 · QS =473	45
RIKEN	Japan	—	35
Universität Heidelberg	Germany	SCImago #459 · THE 49 · QS 80	32
Seoul National University	South Korea	SCImago #135 · THE =58 · QS =38	31
The University of Tokyo	Japan	SCImago #141 · THE 26 · QS =36	31
University of Minnesota	United States	SCImago #165 · THE 88 · QS 210	31
Peking University	China	SCImago #11 · THE 13 · QS 14	30
Soochow University	People's Republic of China	QS 801-850	30
Nanyang Technological University	Singapore	SCImago #137	28
Tohoku University	Japan	SCImago #656 · THE =103 · QS 109	27
Tsinghua University	China	SCImago #8 · THE 12 · QS =17	23
Huazhong University of Science and Technology	China	SCImago #25 · THE =176 · QS 319	23

Geographic distribution of citing authors

Country	Citing papers
China	589
United States	262
Japan	226
Germany	144
South Korea	138
India	90
Netherlands	83
Canada	75
United Kingdom	59
Singapore	55
Italy	51
Switzerland	49

Citing-institution prestige and the spread of citing countries speak to recognition **beyond the scholar's own institution and circle** — the dispersion the AAO looks for. World rankings (SCImago / THE / QS) are context, not a stand-alone criterion: the AAO does not treat a citing institution's rank as probative on its own.

F. AAO Precedent Considerations

Pre-filing self-check (AAO denial patterns)

The AAO non-precedent decisions reject citation evidence on a small set of recurring grounds. Confirm the petition addresses each before filing:

- ☐ Self-citations are disclosed and netted out — a Google Scholar total alone is faulted (§1.1).
- ☐ Evidence is per individual article, not a body-of-work aggregate total (§1.2).
- ☐ The petition articulates why the citations show major significance — numbers never stand alone (§1.5).
- ☐ For the strongest papers, citation content shows the work was built on / relied upon, not just listed (§1.6, §2.2).
- ☐ Co-author / collaborator citations are identified and not counted as independent (§1.7).
- ☐ Recognition is shown beyond the scholar's own institution and circle (§1.8).
- ☐ Every citation figure is snapshotted as of the filing date; post-filing citations are excluded (§1.9).
- ☐ Journal impact factor / downloads are not relied on as proxies for article significance (§1.10, §1.12).
- ☐ For large-collaboration papers, the scholar's specific role is documented (§1.13).
- ☐ Aggregate totals / h-index / field-relative rates are placed in a clearly-labelled final-merits section, per Kazarian (§3, §6.1.7).

Disclaimer

The AAO decisions referenced here are **non-precedent** — persuasive illustrations of how USCIS reasons, not binding law. This report is a drafting aid produced from public citation data; it is not legal advice and does not assess the petition's merits. All analysis must be reviewed by qualified immigration counsel.

G. Citation Evidence Index

Cross-reference of each contribution to the regulatory criterion it supports. Counsel should map these to the petition's exhibit numbers.

Contribution	Core paper	Indep. cites	Supports
Contribution 1	High current density in light-emitting transistors of organic single crystals	569	Dhanasar — Prong 2 (well-positioned)
Contribution 2	Carbon-based quantum dots for supercapacitors: Recent advances and future challenges	69	Dhanasar — Prong 2 (well-positioned)