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RESEARCH

Interests	Semiconductor nanomaterials. aterials. Flexible perovskite solar cells
Areas	Electrical and Electronic Engineering · Inorganic Chemistry · Materials Chemistry · Renewable Energy, Sustainability and the Environment · Electrochemistry · Electronic, Optical and Magnetic Materials

RESEARCH SUMMARY

14	322	8	7	2.17	40%
Publications	Citations	h-index	i10-index	Field-weighted impact	World top 10%

Counted from the 14 publications listed below, 2017–2026. Field-weighted impact is the mean over the 5 works scored for it; 1.00 is the world average for works of the same field, type and year. 2 of the 5 papers scored for it are among the world's most cited tenth for their field, type and year.

PUBLICATIONS

Journal articles 12

1. Daniel Nframah Ampong, Emmanuel Agyekum, Perseverance Dzikunu, **Emmanuel Acheampong Tsiwah**, Martin Luther Yeboah, Patrick Aggrey, Martinson Addo Nartey, Frank Ofori Agyemang, Kwadwo Mensah-Darkwa, Ram K. Gupta (2026). Exploring the potential of 1D materials in enhancing lithium-sulfur battery performance: A comprehensive review. *Materials Today Nano*. https://doi.org/10.1016/j.mtnano.2026.100783
2. Daniel Nframah Ampong, Elijah Effah, **Emmanuel Acheampong Tsiwah**, Anuj Kumar, Emmanuel Agyekum, Esther Naa Ayorkor Doku, Obed Issaka, Frank Ofori Agyemang, Kwadwo Mensah-Darkwa, Ram K. Gupta (2024). Advances and challenges in covalent organic frameworks as an emerging class of materials for energy and environmental concerns. *Coordination Chemistry Reviews*. https://doi.org/10.1016/j.ccr.2024.216121
3. **EA Tsiwah** (2024). Multi-site Passivation of ZnO Metal Oxides via Biomolecules for Efficient and Highly Stable Organic Solar Cells. *Chinese Journal of Chemistry*. https://doi.org/10.1002/cjoc.202400093
4. Kwadwo Mensah-Darkwa, Daniel Nframah Ampong, **Emmanuel Acheampong Tsiwah**, Anuj Kumar, Martinson Addo Nartey, Patrick Aggrey, Frank Ofori Agyemang, Ram K. Gupta (2023). Realization of molecular models as heterogeneous electrocatalysts for activation of dioxygen. *Molecular Catalysis*. https://doi.org/10.1016/j.mcat.2023.113375
5. **EA Tsiwah** (2022). 7 2D Nanomaterials Using. *2D Nanomaterials: Chemistry and Properties*.
6. **Emmanuel Acheampong Tsiwah**, Hao Dong, Yongfei Hu, Tao Zeng, Yunxia Chen, Kwadwo Mensah-Darkwa, Emmanuel Tsiwah Acheampong, Ghafar Ali, Yi Xie (2022). Stabilizing red-emitting all-inorganic perovskite nanocrystals by a ligand-mediated room-temperature procedure. *CrystEngComm*. https://doi.org/10.1039/d2ce00910b
7. **EA Tsiwah** (2020). Base-catalyzed synthesis of superhydrophobic and antireflective films for enhanced photoelectronic applications. *Journal of Materials Research and Technology*. https://www.sciencedirect.com/science/article/pii/S2238785420300028

8. **EA Tsiwah** (2019). Tin-assisted growth of all-inorganic perovskite nanoplatelets with controllable morphologies and complementary emissions. *CrystEngComm*. https://pubs.rsc.org/ce/article-abstract/21/14/2388/637337
9. **E Acheampong Tsiwah** (2019). Trivalent ion mediated abnormal growth of all-inorganic perovskite nanocrystals and their divergent emission properties. *Nanoscale*. https://pubs.rsc.org/nr/article-abstract/11/16/7903/652111
10. **EA Tsiwah** (2018). Constructing non-fluorinated porous superhydrophobic SiO2-based films with robust mechanical properties. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*. https://www.sciencedirect.com/science/article/pii/S0927775718303431
11. **TA Emmanuel** (2017). Heat-up and gram-scale synthesis of Cu-poor CZTS nanocrystals with controllable compositions and shapes. *CrystEngComm*. https://pubs.rsc.org/ce/article-abstract/19/15/2013/557749
12. **EA Tsiwah** (2017). One-pot scalable synthesis of all-inorganic perovskite nanocrystals with tunable morphology, composition and photoluminescence. *CrystEngComm*. https://pubs.rsc.org/ce/article-abstract/19/46/7041/558279

Book chapters 2

1. K Mensash-Darkwa, DN Ampong, **EA Tsiwah** (2022). 2D Nanomaterials Using Thin Film Deposition Technologies. *2D Nanomaterials*. https://doi.org/10.1201/9781003178453-7/2d-nanomaterials-using-thin-film-deposition-technologies-kwadwo-mensash-darkwa-daniel-nframah-ampong-daniel-yeboah-emmanuel-acheampong-tsiwah-ram-gupta
2. Kwadwo Mensah-Darkwa, Daniel N. Ampong, Daniel Yeboah, **Emmanuel A. Tsiwah**, Ram K. Gupta (2022). Organic Electrodes for Flexible Energy Storage Devices. *Engineering materials*. https://doi.org/10.1007/978-3-030-98021-4_19