Prof. Francis Boakye

Faculty of Physical and Computational Sciences
Kwame Nkrumah University of Science and Technology

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RESEARCH

Interests	Condensed Matter Physics
Areas	Materials Chemistry · Electrical and Electronic Engineering · Electronic, Optical and Magnetic Materials · Atomic and Molecular Physics, and Optics · Biomedical Engineering · Mechanics of Materials

RESEARCH SUMMARY

61	607	13	18	1.12	5%
Publications	Citations	h-index	i10-index	Field-weighted impact	World top 10%

Counted from the 61 publications listed below, 1979–2025. Field-weighted impact is the mean over the 43 works scored for it; 1.00 is the world average for works of the same field, type and year. 2 of the 43 papers scored for it are among the world's most cited tenth for their field, type and year.

PUBLICATIONS

Journal articles 61

1. D.B. Puzer, A.C.K. Amuzu, A. Abandoh, I. Nkrumah, B. Kwakye-Awuah, F.K. Ampong, R.K. Nkum, **F. Boakye** (2025). A New Approach of Obtaining Sodium Metasilicate from Dealuminated Kaolin for The Synthesis of Amorphous Silicon Dioxide Nanoparticles. *East European Journal of Physics*. https://doi.org/10.26565/2312-4334-2025-2-38
2. D. A. Adu-Boadu, M. Paal, M. B. Mensah, I. Nkrumah, R. Y. Tamakloe, F. K. Ampong, R. K. Nkum, **F. Boakye** (2025). Synthesis and characterization of Cd1-xPbxSe (0≤x≤1) thin films deposited by chemical bath for photovoltaic application. *Chalcogenide Letters*. https://doi.org/10.15251/cl.2025.227.603
3. I. Nkrumah, F. K. Ampong, A. Britwum, M. Paal, B. Kwakye-Awuah, R. K. Nkum, **F. Boakye** (2023). Determining the majority charge carrier, optical and structural properties of electrochemically deposited lead tin sulfide (PbSnS) thin films. *Chalcogenide Letters*. https://doi.org/10.15251/cl.2023.203.205
4. **Francis Boakye**, Philip Antwi-Agyei, Lawrence Guodaar (2023). Farmers response to climate variability and change in rainfed farming systems: Insight from lived experiences of farmers. *Heliyon*. https://doi.org/10.1016/j.heliyon.2023.e19656
5. Raymond A. Antwi, Isaac Nkrumah, Francis K. Ampong, Mark Paal, Reuben Y. Tamakloe, Robert K. Nkum, **Francis Boakye** (2023). Synthesis of Pure and Manganese Doped Zinc Oxide Nanoparticles by a Solution Growth Technique: Structural and Optical Investigation. *East European Journal of Physics*. https://doi.org/10.26565/2312-4334-2023-4-13
6. E.A. Botchway, Francis Kofi Ampong, Isaac Nkrumah, D.B. Puzer, Robert Kwame Nkum, **Francis Boakye** (2023). The CZTS Thin Films Grown by Sulfurization of Electrodeposited Metallic Precursors: The Effect of Increasing Tin Content of the Metallic Precursors on the Structure, Morphology and Optical Properties of the Thin Films. *East European Journal of Physics*. https://doi.org/10.26565/2312-4334-2023-2-28
7. I. Nkrumah, F. K. Ampong, A. Britwum, M. Paal, B. Kwakye-Awuah, R. K. Nkum, **F. Boakye** (2023). The effect of the concentration of tin (Sn) in the metallic precursor, on the structure, morphology, optical and electrical properties of electrochemically deposited lead-tin-sulphide (PbSnS) thin films. *Chalcogenide Letters*. https://doi.org/10.15251/cl.2023.206.399

8. D. B. Puzer, I. Nkrumah, F. K. Ampong, M. Paal, E. A. Botchway, R. K. Nkum, **F. Boakye** (2021). Copper-tin-sulphide (CTS) thin films, obtained by a two-electrode electrochemical deposition of metal precursors, followed by soft annealing and sulfurization. *Chalcogenide Letters*. https://doi.org/10.15251/cl.2021.188.481

9. C. K. BANDOH, I. NKRUMAH, F. K. AMPONG, R. K. NKUM, **F. BOAKYE** (2021). EFFECT OF ANNEALING ON THE STRUCTURE AND OPTICAL PROPERTIES OF LEAD SELENIDE AND CADMIUM SELENIDE THIN FILM PREPARED BY CHEMICAL BATH DEPOSITION. *Chalcogenide Letters*. https://doi.org/10.15251/cl.2021.182.81

10. Esau Nii Abekah Akwetey Armah, Martin Egblewogbe, Hubert Azoda Koffi, Alfred Ato Yankson, Francis Kofi Ampong, **Francis Boakye**, Josef Kwaku Ametefee Amuzu, Robert Kwame Nkum (2020). Solubility of Mn in ZnO Crystallites Synthesized Using Solid State Techniques. *Advanced Nano Research*. https://doi.org/10.21467/anr.3.1.28-39

11. Mark Paal, Isaac Nkrumah, Francis K. Ampong, David Ngbiche, Robert K. Nkum, **Francis Boakye** (2020). The Effect of Deposition Time and Sulfurization Temperature on The Optical and Structural Properties of Iron Sulfide Thin Films Deposited from Acidic Chemical Baths. *Science Journal of University of Zakho*. https://doi.org/10.25271/sjuoz.2020.8.3.752

12. Emmanuel A. Botchway, Francis K. Ampong, Isaac Nkrumah, **Francis K. Boakye**, Robert K. Nkum (2019). Growth of a Pure and Single Phase Iron Sulfide (Pyrite) Thin Film by Electrochemical Deposition for Photovoltaic Applications. *Open Journal of Applied Sciences*. https://doi.org/10.4236/ojapps.2019.99059

13. David U. Ngbiche, Isaac Nkrumah, Francis K. Ampong, Mark Paal, Robert K. Nkum, **Francis K. Boakye** (2019). Optical and Structural Properties of Chemical Bath Deposited Cadmium Sulphur Selenide (CdS1−xSex (0 ≤ x ≤ 1)) Thin Films. *Open Journal of Applied Sciences*. https://doi.org/10.4236/ojapps.2019.911064

14. Esau Abekah Armah, Francis Kofi Ampong, Martin Egblewogbe, Hubert Azoda Koffi, **Francis Boakye**, Josef Kwaku Ametefee Amuzu, Robert Kwame Nkum (2019). Solubility of Mn in ZnO Nanocrystallites using Wet Chemical Synthesis. *Advanced Nano Research*. https://doi.org/10.21467/anr.2.1.53-61

15. Tizazu Abza, Francis Kofi Ampong, Fekadu Gashaw Hone, Robert Kwame Nkum, **Francis Boakye** (2018). Preparation of cadmium zinc sulfide (Cd1−xZnxS) thin films from acidic chemical baths. *Thin Solid Films*. https://doi.org/10.1016/j.tsf.2018.09.011

16. Akwasi Acheampong, FK Ampong, I Nkrumah, RK Nkum, **F Boakye** (2017). A new route for the synthesis of CdS thin films from acidic chemical baths. *International Journal of in Films Science and Technology*. https://www.researchgate.net/profile/Tizazu-Abza-2/publication/317547711_A_New_Route_for_the_Synthesis_of_CdS_Thin_Films_from_Acidic_Chemical_Baths/links/5bb35a5545851574f7f47a70/A-New-Route-for-the-Synthesis-of-CdS-Thin-Films-from-Acidic-Chemical-Baths.pdf?_sg%5B0%5D%5C%5Cx3dstarted_experiment_milestone%5C%5Cx26origin%5C%5Cx3djournalDetail

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18. Fekadu Gashaw Hone, Francis Kofi Ampong, Robert Kwame Nkum, **Francis Boakye** (2016). Band gap engineering in lead sulphur selenide (PbS1−x Se x) thin films synthesized by chemical bath deposition method. *Journal of Materials Science Materials in Electronics*. https://doi.org/10.1007/s10854-016-5874-6

19. Kwasi Obiri-Danso, FK Ampong, I Nkrumah, RK Nkum, **F Boakye** (2016). The influence of deposition temperature on the structure and optical band gap of zinc sulphide thin films deposited from acidic chemical baths. *Elixir*. https://www.researchgate.net/profile/Tizazu-Abza-2/publication/328026602_The_influence_of_deposition_temperature_on_the_structure_and_optical_band_gap_of_zinc_sulphide_thin_films_deposited_from_acidic_chemical_baths/links/5f292e37a6fdcccc43a8a9d8/The-influence-of-deposition-temperature-on-the-structure-and-optical-band-gap-of-zinc-sulphide-thin-films-deposited-from-acidic-chemical-baths.pdf

20. FK Ampong, I Nkrumah, RK Nkum, **F Boakye** (2015). Effect of Annealing on the structural, morphological and optical band gap of nanocrystalline cadmium selenide thin films synthesized by chemical bath

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22. Fekadu Gashaw Hone, Francis Kofi Ampong, Tizazu Abza, Isaac Nkrumah, Mark Paal, Robert Kwame Nkum, **Francis Boakye** (2015). The effect of deposition time on the structural, morphological and optical band gap of lead selenide thin films synthesized by chemical bath deposition method. *Materials Letters*. https://doi.org/10.1016/j.matlet.2015.04.074
23. **Francis Boakye**, Ralf Krumkamp, Benno Kreuels, Nimako Sarpong, Clemens Frank, Lutz Ehlkes, Julius Fobil, Kennedy Gyau, Anna Jaeger, Benedicta Bosu, Florian Marks, Ellis Owusu-Dabo, Bernd Salzberger, Jürgen May (2015). Urbanicity and Paediatric Bacteraemia in Ghana—A Case-Control Study within a Rural-Urban Transition Zone. *PLoS ONE*. https://doi.org/10.1371/journal.pone.0139433
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26. G. Inkoom, **F. Boakye**, J. Archer (2014). Temperature and Angular Dependence of Ferromagnetic Resonance (FMR) Signal of La0.7Sr0.3MnO3 (LSMO) Thin Film Using FMR Technique. *Research Journal of Applied Sciences Engineering and Technology*. https://doi.org/10.19026/rjaset.7.643
27. Francis K. Ampong, Johannes A.M. Awudza, R.K. Nkum, **F. Boakye**, P. John Thomas, Paul O'Brien (2014). Ternary cadmium zinc sulphide films with high charge mobilities. *Solid State Sciences*. https://doi.org/10.1016/j.solidstatesciences.2014.12.013
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29. I. Nkrumah ., FK Ampong, B Kwakye-Awuah, **F Boakye** (2013). SYNTHESIS AND CHARACTERIZATION OF ZNO THIN FILMS DEPOSITED BY CHEMICAL BATH TECHNIQUE. *International Journal of Research in Engineering and Technology*. https://doi.org/10.15623/ijret.2013.0212135
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32. RK Nkum, EKK Abavare, **F Boakye** (2012). Optical band gap, extinction coefficient and refractive index of K (NO3) 1-x (ClO3) x films. *Optoelectronics and Advanced Materials-Rapid Communications*. https://oam-rc.inoe.ro/articles/optical-band-gap-extinction-coefficient-and-refractive-index-of-kno31-xclo3x-films/
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39. FK Ampong, NK Asare Donkor, **F Boakye** (2010). The Effect of Thermal Annealing on the Optical Band Gap of Cadmium Sulphide Thin Films, Prepared by the Chemical bath Deposition Technique. *Journal of the Ghana Science Association*. https://doi.org/10.4314/jgsa.v12i2.62798

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