Peter Osei- Wusu Adueming

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RESEARCH

Interests	Optical Spectroscopy · Biophysics · Biophotonics · Imaging Optics
Areas	Molecular Biology · Analytical Chemistry · Biophysics · Food Science · Insect Science · Radiology, Nuclear Medicine and Imaging

RESEARCH SUMMARY

25	229	6	5	1.28	19%
Publications	Citations	h-index	i10-index	Field-weighted impact	World top 10%

Counted from the 25 publications listed below, 2011–2026. Field-weighted impact is the mean over the 21 works scored for it; 1.00 is the world average for works of the same field, type and year. 4 of the 21 papers scored for it are among the world's most cited tenth for their field, type and year.

POSITIONS

Lecturer 2021–present
Physics, University of Cape Coast, Cape Coast, Ghana

EDUCATION AND QUALIFICATIONS

Ph.D 2020–present
Physics, University of Cape Coast, Cape Coast, Ghana

PUBLICATIONS

Journal articles 22

1. Andreas A. Kudom, Martin Bosompem, Michael O. Adu, Benedict Afful, Benjamin Anderson, Francis Armah, Paul A. Asare, Joana Ayettey, Ben A. Mensah, **Peter Osei-Wusu Adueming** (2026). Urban herbicide use threatens a non-target butterfly (Hypolimnas misippus) through direct toxicity and host plant stress in Ghana. *PLOS Ecosystems*. https://doi.org/10.1371/journal.pesy.0000020
2. Andrew Huzortey, CLY Amuah, J Opoku-Ansah, **POW Adueming** (2025). Classification of organic and conventional cocoa beans using laser-induced fluorescence spectroscopy combined with chemometric techniques. *Journal of Fluorescence*.
3. George Nkrumah Osei, Ansumana Bockarie, Albert Akpalu, **Peter Osei-Wusu Adueming**, Maxwell Hubert Antwi, Foster Appiah, Linus Kpelle, David Mawutor Donkor, David Larbi Simpong (2025). Diagnostic potential of near-infrared spectroscopy in mild cognitive impairment and neurodegenerative disorders: Implications for resource-limited settings. *Alzheimer s & Dementia*. https://doi.org/10.1002/alz.70769
4. Jerry Opoku-Ansah, Rabbi Boateng, Charles Lloyd Yeboah Amuah, **Peter Osei-Wusu Adueming**, Justice Allotey Pappoe, Jonathan Ntow, Kwesi Quagraine, Shemmira Yunus, Benjamin Anderson, Moses Jojo Eghan (2025). Identification of Spectral Fingerprints in Different Batches of Antimalarial Herbal Drugs Using Laser-Induced Autofluorescence and Chemometric Techniques. *Journal of Fluorescence*. https://doi.org/10.1007/s10895-025-04192-3
5. Rabbi Boateng, Jerry Opoku-Ansah, Charles Lloyd Yeboah Amuah, **Peter Osei-Wusu Adueming**, Andrew Huzortey, Kingsley Taah, Moses Jojo Eghan (2025). Laser-induced fluorescence spectroscopy combined

with multivariate analysis for rice seeds and grains discrimination. *Applied Optics*. https://doi.org/10.1364/ao.546627

6. Rabbi Boateng, Hampus Månefjord, Jerry Opoku-Ansah, **Peter Osei-Wusu Adueming**, Andrew Huzortey, Moses Jojo Eghan, Benjamin Anderson, Kingsley Taah, Charles Lloyd Yeboah Amuah (2025). Modular 3D-printed biophotonic platform for cost-effective hyperspectral and polarimetric imaging. *Optics Continuum*. https://doi.org/10.1364/optcon.575071
7. Sylvia Owusua Donkor, Samuel Sonko Sackey, Michael Kwame Vowotor, Charles Lloyd Yeboah Amuah, Rabbi Boateng, Ebenezer Teye Tatchie, Jerry Opoku-Ansah, **Peter Osei-Wusu Adueming** (2024). Analysis of Colorfastness in Metallic Prints Using Absorption Spectroscopy. *Journal of Spectroscopy*. https://doi.org/10.1155/jspe/2632412
8. **Peter Osei-Wusu Adueming**, Jerry Opoku-Ansah, Andrew Atiogbe Huzortey, Charles Lloyd Yeboah Amuah, Kwasi Nyandey, Moses Jojo Eghan, Benjamin Anderson, Samuel Sonko Sackey (2023). A Feasibility Study on Monitoring Shelf Life of Bottled Natural Fruit Juice Using Laser-Induced Autofluorescence. *International Journal of Optics*. https://doi.org/10.1155/2023/7458190
9. Justice Allotey Pappoe, Jerry Opoku-Ansah, Charles Lloyd Yeboah Amuah, **Peter Osei-Wusu Adueming**, Samuel Sonko Sackey, Rabbi Boateng, Justice Kwaku Addo, Moses Jojo Eghan, Patrick Mensah-Amoah, Benjamin Anderson (2023). Automatic Classification of Antimalarial Herbal Drugs Exposed to Ultraviolet Radiation from Unexposed Ones Using Laser-Induced Autofluorescence with Chemometric Techniques. *Journal of Fluorescence*. https://doi.org/10.1007/s10895-023-03281-5
10. Emmanuel Kwasi Abu, Carl Halladay Abraham, Albert Kofi Dadzie, Enyam Amewuho Morny, Michael Ntodie, Stephen Ocansey, Samuel Abokyi, Andrew Owusu-Ansah, Naa Adjeley Addo, Michael Williams, Asantewaa Aboagye-McCarthy, Godfred Sakyi-Badu, Paa Kwesi Fynn Hope, **Peter Osei-Wusu Adueming** (2023). Central contrast sensitivity perimetry discriminates between glaucomatous and non-glaucomatous eyes. *Therapeutic Advances in Ophthalmology*. https://doi.org/10.1177/25158414231208284
11. Justice Allotey Pappoe, Olivia Mongson, Charles Lloyd Yeboah Amuah, Jerry Opoku-Ansah, **Peter Osei-Wusu Adueming**, Rabbi Boateng, Moses Jojo Eghan, Samuel Sonko Sackey, Elliot Kwaku Anyidoho, Andrew Atiogbe Huzortey, Benjamin Anderson, Michael Kwame Vowotor, Ernest Teye (2023). Classification of Organic and Conventional Cocoa Beans Using Laser-Induced Fluorescence Spectroscopy Combined with Chemometric Techniques. *Journal of Fluorescence*. https://doi.org/10.1007/s10895-023-03499-3
12. Rabbi Boateng, Jerry Opoku-Ansah, Moses Jojo Eghan, **Peter Osei-Wusu Adueming**, Charles Lloyd Yeboah Amuah (2023). Identification of Commercial Antimalarial Herbal Drugs Using Laser-Induced Autofluorescence Technique and Multivariate Algorithms. *Journal of Fluorescence*. https://doi.org/10.1007/s10895-023-03309-w
13. Jerry Opoku-Ansah, Ewura Seidu Yahaya, Charles Lloyd Yeboah Amuah, Regina Nyorkeh, Agnes Adom-Konadu, **Peter Osei-Wusu Adueming**, Ernest Teye (2022). A feasibility study on the use of a pocket-sized NIR spectrometer and multivariate algorithm to distinguish expired drugs from unexpired ones. *Analytical Methods*. https://doi.org/10.1039/d2ay00541g
14. Samuel Bert Boadi-Kusi, **Peter Osei-Wusu Adueming**, Francisca Ama Hammond, Ebenezer Oduro Antiri (2021). Computer vision syndrome and its associated ergonomic factors among bank workers. *International Journal of Occupational Safety and Ergonomics*. https://doi.org/10.1080/10803548.2021.1897260
15. SAMUEL BERT BOADI-KUSI OD, Sampson Listowell Abu, George Oppong Acheampong, **Peter Osei-Wusu Adueming**, Emmanuel Kwasi Abu (2020). Association between Poor Ergophthalmologic Practices and Computer Vision Syndrome among University Administrative Staff in Ghana. *Journal of Environmental and Public Health*. https://doi.org/10.1155/2020/7516357
16. **Peter Osei-Wusu Adueming**, Moses Jojo Eghan, Benjamin Anderson, Samuel Kyei, Jerry Opoku-Ansah, Charles Lloyd Yeboah Amuah, Charles Darko Takyi, Paul Kingsley Buah-Bassuah (2020). Laser-induced autofluorescence assisted by multivariate techniques discriminates a cataractous lens from healthy lens tissues of Sprague–Dawley rats. *Journal of the Optical Society of America A*. https://doi.org/10.1364/josaa.394555

17. Charles Lloyd Yeboah Amuah, Moses Jojo Eghan, Benjamin Anderson, **Peter Osei-Wusu Adueming**, Jerry Opoku-Ansah, Paul Kingsley Buah-Bassuah (2020). Laser-induced fluorescence combined with multivariate techniques identifies the geographical origin of antimalarial herbal plants. *Journal of the Optical Society of America A*. https://doi.org/10.1364/josaa.396701

18. Charles L. Y. Amuah, Ernest Teye, Francis Padi Lamptey, Kwasi Nyandey, Jerry Opoku-Ansah, **Peter Osei-Wusu Adueming** (2019). Feasibility Study of the Use of Handheld NIR Spectrometer for Simultaneous Authentication and Quantification of Quality Parameters in Intact Pineapple Fruits. *Journal of Spectroscopy*. https://doi.org/10.1155/2019/5975461

19. Jerry Opoku-Ansah, Moses Jojo Eghan, Benjamin Anderson, Johnson Nyarko Boampong, Raymond Edziah, **Peter Osei-Wusu Adueming**, Charles Lloyd Yeboah Amuah (2019). Optical Identification of Plasmodium falciparum Malarial Byproduct for Parasite Density Estimation. *International Journal of Optics*. https://doi.org/10.1155/2019/8782567

20. Jerry Opoku-Ansah, Benjamin Anderson, Moses J. Eghan, **Peter Osei-Wusu Adueming**, Charles L.Y. Amuah, Samuel S. Sackey (2017). A Retrofitted Metallurgical Microscope Using Light Emitting Diodes for Multi-Spectral Imaging. *Modern Applied Science*. https://doi.org/10.5539/mas.v11n9p30

21. **Peter Osei-Wusu Adueming**, Moses Jojo Eghan, Benjamin Anderson, Samuel Kyei, Jerry Opoku-Ansah, Charles L. Y. Amuah, Samuel Sonko Sackey, Paul Kingsley Buah-Bassuah (2017). Multispectral Imaging in Combination with Multivariate Analysis Discriminates Selenite Induced Cataractous Lenses from Healthy Lenses of Sprague-Dawley Rats. *Open Journal of Biophysics*. https://doi.org/10.4236/ojbiphy.2017.73011

22. **Peter Osei- Wusu Adueming**, J. M. Eghan, Johnson Nyarko Boampong (2013). Automated Protocol for Counting Malaria Parasites (P. falciparum) from Digital Microscopic Image Based on L* a* b* Colour Model and K-Means Clustering. *International Journal of Computer Science and Security (IJCSS)*. https://mail.cscjournals.org/library/manuscriptinfo.php?mc=IJCSS-887

Conference papers 1

1. C L Y Amuah, J M Eghan, B Anderson, **P Osei Wusu Adueming**, J Opoku-Ansah (2017). Laser Induced Fluorescence in combination with Multivariate analysis classifies anti-malarial herbal plants. https://doi.org/10.1364/fio.2017.jtu2a.71

Theses 2

1. **Peter Osei–Wusu Adueming** (2020). Characterization of cataractous lenses of Sprague–Dawley rats using selected optical spectroscopic techniques. *University of Cape Coast*. https://ir.ucc.edu.gh/server/api/core/bitstreams/2ca09e79-c12e-4ddf-a21c-9aa289b2f8b4/content

2. **Peter Osei-Wusu Adueming** (2011). Wavelength modulation absorption spectroscopy with 2f signal detection: application to molecular oxygen detection. *University of Cape Coast*. https://ir.ucc.edu.gh/server/api/core/bitstreams/312d0de8-7600-4af2-8ed9-59bbcfb6edf4/content