Jerry Opoku-Ansah

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RESEARCH

Interests	Biomedical Optics/Applied Spectroscopy
Areas	Analytical Chemistry · Molecular Biology · Biophysics · Public Health, Environmental and Occupational Health · Computer Vision and Pattern Recognition · Food Science

RESEARCH SUMMARY

26	153	6	3	0.90	10%
Publications	Citations	h-index	i10-index	Field-weighted impact	World top 10%

Counted from the 26 publications listed below, 2013–2026. 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. 2 of the 21 papers scored for it are among the world's most cited tenth for their field, type and year.

POSITIONS

Senior Lecturer 2022–2026
Physics, University of Cape Coast, Cape Coast, Ghana

Lecturer 2017–2022
Physics, University of Cape Coast, Cape Coast, Ghana

Principal Research Assistant 2013–2017
Physics, University of Cape Coast, Cape Coast, Ghana

Senior Research Assistant 2009–2012
Physics, University of Cape Coast, Cape Coast, Ghana

National Service 2007–2008
Physics, University of Cape Coast, Cape Coast, Ghana

EDUCATION AND QUALIFICATIONS

Doctor of Philosophy 2013–2016
Physics, University of Cape Coast, Cape Coast, Ghana

Master of Philosophy 2009–2012
Physics, University of Cape Coast, Cape Coast, Ghana

Bachelor of Science 2003–2007
Physics, University of Cape Coast, Cape Coast, Ghana

PUBLICATIONS

Journal articles 24

1. Charles Lloyd Yeboah Amuah, Francis Padi Lamptey, Vida Gyimah Boadu, **Jerry Opoku-Ansah**, Elliot Kwaku Anyidoho, Haruna Gado Yakubu, Olivia Dzifa Peace Vordoagu, Samuel Sonko Sackey, Ernest Teye (2026). Detection of defective cocoa beans using machine learning techniques and NIR spectral data fusion. *Spectrochimica Acta Part A Molecular and Biomolecular Spectroscopy*. https://doi.org/10.1016/j.saa.2026.127792

2. Juliana Opoku Yeboah, Roseline Love MacArthur, Francis Padi Lamptey, **Jerry Opoku-Ansah**, Charles Lloyd Yeboah Amuah, Robert Agbemafle, Caleb Mawuli Agbale, Ernest Teye (2026). Exploring deep learning potential to authenticate vegetable oils and detect fraud using a micro-spectroscopic technique and chemometrics. *Analytical Methods*. https://doi.org/10.1039/d6ay00555a
3. Savanna Nyarko, Moses Jojo Eghan, Catharina De Lange Davies, Mercy Afadzi Tetteh, **Jerry Opoku-Ansah**, Raphaell Moreira, E. Johan Foster, Solomon Kingsley Katu, Elvis K. Tiburu (2026). Impact of Synthesis Temperature on the Drug Loading Capacity of Linde Type A Zeolite. *Journal of biomimetics, biomaterials and biomedical engineering*. https://doi.org/10.4028/p-s7thip
4. 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*.
5. **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
6. 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
7. 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
8. 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
9. 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
10. 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
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. **J. Opoku-Ansah** (2020). INNOVATIVE ARDUINO-BASED LIQUIFIED PETROLEUM GAS MONITORING SYSTEM FOR HOUSEHOLD APPLICATION. *Journal of Ghana Science Association*.
15. 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
16. 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
17. 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
18. **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
19. **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
20. 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
21. **Jerry Opoku-Ansah** (2016). Laser-Induced Auto-fluorescence for Plasmodium falciparum Parasite Density Estimation. *Applied Physics Research*.
22. **Jerry Opoku-Ansah**, Moses Jojo Eghan, Benjamin Anderson, Johnson Nyarko Boampong, Paul Kingsley Buah-Bassuah (2016). Laser-Induced Autofluorescence Technique for Plasmodium falciparum Parasite Density Estimation. *Applied Physics Research*. https://doi.org/10.5539/apr.v8n2p43
23. **Jerry Opoku -Ansah**, Moses Jojo Eghan, Benjamin Anderson, Johnson Nyarko Boampong (2014). Wavelength Markers for Malaria (Plasmodium Falciparum) Infected and Uninfected Red Blood Cells for Ring and Trophozoite Stages. *Applied Physics Research*. https://doi.org/10.5539/apr.v6n2p47
24. **J Opoku-Ansah**, 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 1

1. **JERRY Opoku-Ansah** (2016). Optical Studies and Characterization of Plasmodium Falciparum Infected Human Red Blood Cells. *PhD. Thesis, University of Cape Coast*. https://ir.ucc.edu.gh/server/api/core/bitstreams/96254201-4738-474c-abdc-7c8b16d1b264/content