

Speaker Biographies

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Chibueze Amanchukwu is a Neubauer Family Assistant Professor at the Pritzker School of Molecular Engineering at the University of Chicago. He received his bachelor's degree in chemical engineering from Texas A&M University as the department's Outstanding Graduating Student, and his PhD in chemical engineering from the Massachusetts Institute of Technology. His lab is focused on the design and synthesis of novel electrolyte media (solid state and liquid), and the study of electrolyte instability and ionic transport phenomena for applications in batteries and electrocatalysis. Borrowing concepts from chemistry and tools from biology, he aims to control interfacial phenomena at the electrode/electrolyte interface, understand degradation mechanisms, and use advanced characterizations tools (especially at Argonne National Lab) for in situ and operando understanding of energy devices. His research has been recognized with awards from the American Chemical Society (Excellence in Graduate Polymer Research) and the American Institute of Chemical Engineers (Session's Best Paper). Amanchukwu has been named a CIFAR Azrieli Global Scholar and received an NSF CAREER award, 3M Nontenured Faculty Award, and an ECS Toyota Young Investigator Fellowship, among other recognitions.



Dickson Andala is an Associate Professor of Materials / Inorganic Chemistry, Multimedia University of Kenya and currently the Chief Executive Officer of the National Research Fund (NRF). He has PhD in Materials Chemistry from Binghamton University and Postdoctoral Fellowship Pennsylvania State University, USA. His research interests lie in the area of nanoscience and nanotechnology and its applications in remediation, sensors, catalysis. He is Lead Expert with NEMA; DOSH and CBRN and a reviewer of several local and international journals. Dickson Andala has served in various senior leadership/management positions including having been the Director to the Kenya Nuclear Regulatory Authority (KNRA), African Materials Research Society (AMRS) boards, Executive Committee Member to Africa Crystallographic Association (AfCA); Chairman Chemistry Department, Multimedia University of Kenya. Membership to various Professional Associations including African Academies of Science (AAS), Kenya National Academy of Sciences (KNAS); Materials Research Society of Kenya, Kenya Chemical Society (KCS).



Harry Atwater is the Otis Booth Leadership Chair of the Division of Engineering and Applied Science, and the Howard Hughes Professor of Applied Physics and Materials Science at the California Institute of Technology. Currently he is the Director for the Liquid Sunlight Alliance (LiSA), a Department of Energy Hub program for solar fuels. Atwater's scientific effort focuses on nanophotonic light-matter interactions and solar energy conversion. His current research in energy centers on high efficiency photovoltaics, carbon capture and removal, and photoelectrochemical processes for generation of solar fuels. His research has resulted in world records for solar photovoltaic conversion and photoelectrochemical water splitting. His work also spans fundamental nanophotonic phenomena, in plasmonics and 2D materials, and also applications including active metasurfaces and optical propulsion. From 2014-2020, Atwater served as Director of the Joint Center for Artificial Photosynthesis (JCAP), the DOE Energy Innovation Hub for solar fuels. Atwater was an early pioneer in nanophotonics and plasmonics; he gave the name to the field of plasmonics in 2001. Atwater is a Member of US National Academy of Engineering, and a Web of Science Highly Cited Researcher. He is also founder of 5 early-stage companies, including Captura, which is developing scalable approaches to carbon dioxide removal from oceanwater, and Alta Devices, which set world records for photovoltaic cell and module efficiency. He is also a Fellow of the SPIE as well as APS, MRS, Optica, and the National Academy of Inventors. He is also the founding Editor in Chief of the journal ACS Photonics, and Chair of the LightSail Committee for the Breakthrough Starshot program. He is the recipient of numerous awards, including the von Hippel Award of the Materials Research Society.



Veronica Augustyn is the Jake and Jennifer Hooks Distinguished Scholar in Materials Science and Engineering, a University Faculty Scholar, and an Associate Professor at North Carolina State University. She is also an Associate Editor for the Journal of Materials Chemistry A and Materials Advances. Her research group focuses on the synthesis and characterization of materials for electrochemical energy and environmental technologies, including batteries, electrochemical capacitors, electrolyzers, and fuel cells. She is interested in the relationships between material composition, structure, and morphology and the resulting electrochemical mechanisms. Her research involves the use of liquid phase and solid state synthesis methods and a variety of in situ and operando electrochemical techniques. She is the faculty advisor of an award-winning international project at NC State, SciBridge, which develops renewable energy research and education collaborations between universities in Africa and the U.S.



Elijah Omolo Avieta is a senior lecturer of physics at the University of Nairobi. He has a PhD in physics from Indiana University-Purdue University-Indianapolis. His expertise in condense matter physics focuses on the nanofabrication of nanoparticles synthesized in high vacuum and the characterization of their electronic states. Specific projects include improving efficiency of solar cells, characterization of electrodes in rechargeable Lithium iron cells, magnetic properties of high pressure deposited nanoparticles, and electronic states of synchrotron radiation synthesized nanoparticles.



Joseph Berry is a Senior Research Fellow at the National Renewable Energy Laboratory working on halide perovskite solar cells. His efforts at NREL emphasize relating basic interfacial properties to relevant device level behaviors in traditional and novel semiconductor heterostructures including oxides, organics and most recently hybrid semiconductors. He is also a principal investigator on the NREL lead Department of Energy, Solar Energy Technology Offices “Advanced Perovskite Cells and Modules” program as well as being the director of the US-Manufacturing of Advanced Perovskites (US-MAP) Consortium, a Fellow at RASEI a joint energy institute between the

University Colorado Boulder and NREL and an Associate Professor of Physics at the University of Colorado Boulder.



Mariana Bertoni is the Fulton Energy and Materials Professor in the School of Electrical, Computer and Energy Engineering at Arizona State University. She joined ASU’s faculty after holding senior scientist positions at two startup companies in the photovoltaic industry and a postdoctoral fellowship at the Massachusetts Institute of Technology. Professor Bertoni received her Ph.D. from Northwestern University in Materials Science and Engineering in 2007 and her Diploma in Chemical Engineering from the Instituto Tecnológico de Buenos Aires. She is a former Fulbright Scholar and a Marie Curie Fellow. In

2022, she was named Hopkins Professor and in 2018, she won the National Academy of Engineering Grainger Foundation Frontiers of Engineering Award for Advancement of Interdisciplinary Research. Her research aims to understand how intrinsic and extrinsic defects affect the electrical and optical properties of energy materials and accordingly engineer the processing steps that will maximize performance.



Simon Billinge earned his Ph.D in Materials Science and Engineering from University of Pennsylvania in 1992, following a BA at Oxford University. He spent 2 years at Los Alamos National Laboratory in New Mexico as a post-doc before joining the faculty as an Assistant Professor in the Department of Physics and Astronomy at Michigan State University in 1994. He became Associate professor in 1999 and full professor in 2003. In 2008 he took up his current position as Professor of Applied Physics, Applied Mathematics and Materials Science at Columbia University and Scientist at Brookhaven

National Laboratory. Prof. Billinge has published more than 200 papers in scholarly journals. He is a fellow of the American Physical Society and the Neutron Scattering Society of America, a former Fulbright and Sloan fellow and has earned a number of awards including being honored in 2011 for contributions to the nation as an immigrant by the Carnegie Corporation of New York, the 2010 J. D. Hanawalt Award of the International Center for Diffraction Data, University Distinguished Faculty award at Michigan State, the Thomas H. Osgood Undergraduate Teaching Award. He is Section Editor of Acta Crystallographica Section A: Advances and Foundations. He regularly chairs and participates in reviews of major facilities and federally funded programs.



Shannon Boettcher is a Professor in the Department of Chemistry and Biochemistry at the University of Oregon. His research is at the intersection of materials science and electrochemistry, with a focus on fundamental to applied aspects of energy conversion and storage. He has been named a DuPont Young Professor, a Cottrell Scholar, a Sloan Fellow, and a Camille-Dreyfus Teacher-Scholar. He is a 2019-2022 ISI highly cited researcher (top 0.1% over past decade) and in 2021 was a Blavatnik National Award Finalist. In 2019 he founded the Oregon Center for Electrochemistry and the first graduate program in Electrochemical Technology in the USA.



Fikile Brushett is an Associate Professor in the Department of Chemical Engineering at the Massachusetts Institute of Technology. Before joining the Institute, he received his Ph.D. in Chemical Engineering from the University of Illinois at Urbana-Champaign and performed postdoctoral work in the electrochemical energy storage group at Argonne National Laboratory. His research group seeks to advance the science and engineering of electrochemical technologies that enable a sustainable energy economy. He is especially interested in the fundamental processes that define the performance, cost, and lifetime of present day and future electrochemical systems. His group currently works on rechargeable batteries for grid energy storage and electrochemical processes for resource management. He also serves as the Research Integration Co-Lead for the Joint Center for Energy Storage Research, a DOE-funded Energy Innovation Hub.



David Cahen studied chemistry & physics at the Hebrew Univ. of Jerusalem (HUJI), materials research at Northwestern Univ., and, as PD, biophysics (of photosynthesis) at the HUJI and the Weizmann Inst. of Science (WIS). As WIS faculty he focusses on opto(bio)electronic materials chemistry & physics, emphasizing what can make such materials sustainable, recently studying self-healing of PV materials and protein electronics. He is presently AVS, MRS and Helmholtz Int'l fellow and visiting prof at Chiba Univ. He is active in energy & sustainability research (first director of the WIS' effort in the field) and education, and in science for peace; from 2017-2022 he headed a group at near-by Bar-Ilan Univ.



Samuel Chigome is a senior researcher in the Nanomaterials Division of the Botswana Institute for Technology Research, and Innovation (BITRI). Samuel is the President of the African Materials Research Society (AMRS), member of the International Advisory Board of the State Key Laboratory for Modification of Chemical Fibers and Polymer Materials (SKLFPM) at Donghua University, member of the Editorial Advisory Board of ACS Nano, member of the Advisory Board of the US-Africa Initiative in Electronic Structure, Editorial Board Member of Discover Materials and co-convener in the Condensed Matter and Materials Physics Working Group of the African Strategy for Fundamental and

Applied Physics.

Jennifer Dunn is an Associate Professor in Northwestern's Chemical and Biological Engineering Department. Prior to joining Northwestern, she led the Biofuels Analysis Group at Argonne National Laboratory. She has also worked in environmental consulting, spending one year living in Brussels, and at the U.S. Environmental Protection Agency. She earned her PhD in Chemical Engineering from the University of Michigan and her B.S. in the field from Purdue University. Jennifer studies emerging technologies, their energy and environmental impacts, and their potential to influence air pollutant and greenhouse gas emissions, water consumption, and energy consumption at the economy-wide level. Particular technologies of interest include biofuels and bioproducts, automotive lithium-ion batteries, fuels and chemicals made from carbon capture and utilization technologies and from natural gas liquids. She applies life cycle analysis as a key tool to evaluate emerging technologies. Furthermore, she characterizes land use and land use change through collaborations with economic modelers and computer vision experts.



Sossina Haile is the Walter P. Murphy Professor of Materials Science and Engineering at Northwestern University, a position she assumed in 2015 after serving 18 years on the faculty at the California Institute of Technology. She earned her Ph.D. in Materials Science and Engineering from the Massachusetts Institute of Technology in 1992. Sossina Haile's research broadly encompasses materials, especially oxides, for sustainable electrochemical energy technologies. Amongst her many awards, in 2008 Sossina Haile received an American Competitiveness and Innovation Fellowship from the U.S. National Science Foundation in recognition of "her timely and transformative research in the energy field and her dedication to inclusive mentoring, education and outreach across many levels." In 2008 she was named by Newsweek Magazine as one of 12 people to watch, and in 2020 she was awarded the Turnbull Lectureship of the Materials Research Society. She is a fellow of the Materials Research Society, the American Ceramics Society, and the African Academy of Sciences, and an associate Fellow the Ethiopian Academy of Sciences.



Kelsey Hatzell is an assistant professor at Princeton university in the Andlinger Center for Energy and Environment and department of Mechanical and aerospace engineering. Hatzell's group primarily work on energy storage and is particularly interested at using non-equilibrium x-ray techniques to probe materials for energy and separation applications. Dr. Hatzell earned her Ph.D. in Material Science and Engineering at Drexel University, her M.S. in Mechanical Engineering from Pennsylvania State University, and her B.S./B.A. in Engineering/Economics from Swarthmore College. Hatzell's research group works on understanding phenomena at solid|liquid, solid|gas, and solid|solid interfaces broadly work in energy storage and conversion. Hatzell is the recipient of several awards including the ORAU Powe Junior Faculty Award (2017), NSF CAREER Award (2019), ECS Toyota Young Investigator Award (2019), finalist for the BASF/Volkswagen Science in Electrochemistry Award (2019), the Nelson "Buck" Robinson award from MRS (2019), Sloan Fellowship in Chemistry (2020), and POLiS Award of Excellence for Female Researchers (2021), NASA Early Career Award (2022) and ONR Young investigator award (2023).





Marta Hatzell is an Associate Professor of Mechanical Engineering and Chemical and Biomolecular Engineering at Georgia Institute of Technology. Hatzell's research group focuses on exploring how to electrify catalytic and separation-based processes to enable sustainable industrial systems. Her group works on materials, characterization, and system analyses for electrolysis, fuel cells, desalination, and solar energy conversion processes. Hatzell completed her BS, MS, and Ph.D. in Mechanical Engineering from Penn State University and an M.Eng in Environmental Engineering from Penn State University. Hatzell's Ph.D. research conducted with Prof. Bruce Logan explored environmental technologies for energy generation and water treatment. She was a NSF graduate research fellow and PEO fellow during her PhD. Hatzell received the outstanding award for early career research at Georgia Tech in 2023. In addition, Hatzell received of other awards including the Moore Inventor Fellowship (2021), ONR Young Investigator Award (2020), Sloan Foundation Fellowship in Chemistry (2020), and the NSF Early CAREER award (2019). Hatzell currently serves as a Senior Editor of the Journal ACS Energy Letters.



Simivu Justus is an Associate Professor of Physics at the Maasai Mara University having over 17 years of teaching and research in areas of basic physics, engineering physics and electronics, solar energy, process control, and photovoltaics. He is a certified Solar PV Trainer having been the coordinator and lead trainer for Solar Photovoltaics for both off the grid and grid-tie systems for over ten years. He has been a consultant in renewable energy and low carbon technology adoption, development of training curriculum for PV in Kenya incorporating T1, T2, and T3 levels. He co-ordinates the promotion of Physics and Science in high schools in Kenya through organized visits and talks to high school students for the department. He also provides policy advice and consultancy on climate change policy with a particular focus on low carbon technology transfer and development to the Government of Kenya towards the implementation of Vision 2030 flagship projects. He is Chair of the Board of Solar for Sub Saharan Communities (S3C) Kenya Foundation, a social venture working in Kenya towards the provision of clean energy to schools and communities in remote villages.



Revocatus Machunda is an associate professor of Materials, Energy, Water, and Environmental Science at The Nelson Mandela African Institution of Science and Technology. His areas of interest lie in the fields of environmental chemistry, toxicology, degradation of materials, analytical chemistry, and instrumentation. His current research is in the areas of water purification (the chemistry and microbial aspects) and renewable energy in the form of biogas and sanitation (mapping of sanitation facilities, developing flow diagrams and resource recovery from fecal sludge). He has characterized biomasses for various applications including energy, activated carbons, and catalysis. He is also working on waste material value addition for applications including plant biomasses such as sisal, a biomass derived from activated carbons. He has worked on quantifying the environmental impacts of pesticides and other geogenic chemicals to the health of workers in specific farms and environment. He has received several grants funded by EU, DFID, COSTECH and DANIDA. He has also worked on quantification and profiling of sanitation workers. He has published over 100

journal papers, book chapters and has two patents on defluoridation technology and Biogas burner manifold assembly.



Tom Mallouk received his bachelor's degree from Brown University, where he did undergraduate research with Aaron Wold. He was a Ph.D. student with Neil Bartlett at the University of California, Berkeley from 1979 to 1983 and a postdoctoral fellow with Mark Wrighton at MIT from 1983-85. He has held faculty positions at the University of Texas at Austin, the Pennsylvania State University, and the University of Pennsylvania, where he is currently Vagelos Professor in Energy Research in the Department of Chemistry. He was associate editor of the Journal of the American Chemical Society from 1996-2020. His research focuses on the synthesis of inorganic materials and their

application to solar energy conversion, catalysis and electrocatalysis, nano- and microscale robotics, low dimensional physical phenomena, chemical separations, and environmental remediation. Mallouk is the author of 400+ publications, including a few good ones. He received the Schreyer Honors College and Priestley teaching awards from Penn State, and his research contributions have been recognized with several awards, including the ACS Award in the Chemistry of Materials. He is a Fellow of the American Chemical Society, a member of the American Academy of Arts and Sciences, and a member of the U.S. National Academy of Sciences.



Dino J. Martins is currently the Chief Executive Officer at the Turkana Basin Institute and a Research Scholar and Lecturer in Ecology and Evolutionary Biology at Princeton University. Dr. Martins' work focuses on the evolution and ecology of interactions between species: insects and plants, vectors and hosts and parasites. Current research includes work with farmers in relation to bees and pesticides and improving pollinator awareness and conservation, general studies of bee evolution and ecology in East Africa, hawkmoth and butterfly pollination, co-evolution and the links between biodiversity and landscape-level processes. Dr Martins currently leads projects on the biology

vectors for malaria, trachoma, leishmaniasis and other neglected tropical diseases in relation to adaptation to climate, landscape and environmental changes in the Turkana Basin and Greater Horn of Africa region. His work has been featured in the Smithsonian magazine, the Guardian, TED, the BBC as well as in National Geographic. Communicating and celebrating biodiversity is one of Dr Martins passions and he has authored the 'Insects of East Africa', 'Butterflies of East Africa' (with S. Collins) and: 'Our Friends the Pollinators: A Handbook of Pollinator Diversity and Conservation in East Africa. This book has been downloaded over 7000 times from the web and content accessed by hundreds of thousands of farmers through digital and social media platforms.

Yedilfana Setarge Mekonnen is an Associate Professor of Natural and Computational Sciences at Addis Ababa University. He earned his PhD in Energy Conversion and Storage Technologies in 2015 from Technical University of Denmark and was a visiting researcher at Stanford University SLAC National Accelerator in 2014 and Fudan University Key Laboratory of Computational Physical Sciences in 2019. He is currently a Junior Associate Member of the Abdus Salam International Center for Theoretical Physics. His main research interests center around energy conversion and storage technologies including advanced rechargeable batteries, fuel cells, solar cells, and photocatalysis. He is a member of the Chemical Society of Ethiopia and the president of the Computation Science and Engineering Society of Ethiopia.



Dr. Y. Shirley Meng is a Professor at the Pritzker School of Molecular Engineering at the University of Chicago. She serves as the Chief Scientist of the Argonne Collaborative Center for Energy Storage Science (ACCESS) Argonne National Laboratory. Dr. Meng is the principal investigator of the research group - Laboratory for Energy Storage and Conversion (LESC), that was established at University of California San Diego since 2009. She held the Zable Chair Professor in Energy Technologies at University of California San Diego (UCSD) from 2017-2022. Dr. Meng received several prestigious awards, including the C3E technology and innovation award (2022), the Faraday Medal of Royal Chemistry Society (2020), International Battery Association IBA Research Award (2019), Blavatnik Awards for Young Scientists Finalist (2018), American Chemical Society ACS Applied Materials & Interfaces Young Investigator Award (2018), C.W. Tobias Young Investigator Award of the Electrochemical Society (2016) and NSF CAREER Award (2011). Dr. Meng is elected Fellow of Electrochemical Society (FECS), Fellow of Materials Research Society (FMRS) and Fellow of American Association for the Advancement of Science (AAAS). She is the author and co-author of more than 280 peer-reviewed journal articles, two book chapters and six issued patents. she is the Editor-in-Chief for Materials Research Society MRS Energy & Sustainability. Dr. Meng received her Ph.D. in Advance Materials for Micro & Nano Systems from the Singapore-MIT Alliance in 2005. She received her bachelor's degree in Materials Science with first class honor from Nanyang Technological University of Singapore in 2000.



Mwema Felix Mwema is a Lecturer of Agriculture-Environment nexus at the Nelson Mandela African Institution of Science and Technology (NM-AIST). He received a PhD in Engineering and Technology from the Thammasat University (Thailand), a M.Eng in Environmental Technology and Management from the King Mongkut's University of Technology Thonburi, (Thailand), and a B.Tech in Agricultural Engineering from the Sam Higginbottom University of Agriculture, Technology and Sciences (India). His research generally focuses on fate and transport of pesticides in the environment, environmental conservation for health and sustainable development, assessment of biomass energy resources (charcoal and firewood) and life cycle assessment of products and services. He is a member of Institution of Engineers Tanzania and Engineers Registration Board.





Sara Skrabalak received her B.A. degree in chemistry from Washington University in St. Louis in 2002 where she conducted research with Professor William Buhro. She then moved to the University of Illinois at Urbana-Champaign where she completed her Ph.D. degree in chemistry in fall of 2006 with the tutelage of Professor Kenneth Suslick. There, she was the recipient of the T.S. Piper Thesis Award for her work on porous materials. She then conducted postdoctoral research at the University of Washington – Seattle with Professors Younan Xia and Xingde Li, designing nanomaterials for biomedical applications. She began her independent career in the Chemistry Department at Indiana University – Bloomington in 2008, where she was named the James H. Rudy Professor in 2015. She is a recipient of numerous awards including the 2014 ACS Award in Pure Chemistry. In 2020 Professor Skrabalak was named a fellow of the American Association for the Advancement of Science and assumed the roles of Editor in Chief for both Chemistry of Materials and ACS Materials Letters. She directs the Center for Single-Entity Nanochemistry and Nanocrystal Design. Her research group focuses on nanomaterial design and synthesis for applications in catalysis, solar energy use, secured electronics, chemical sensing, and more.



G. Jeffrey Snyder obtained his B.S. degree in physics, chemistry and mathematics at Cornell University (1991) focusing on solid state chemistry which he continued during a two year stay at the Max Planck Institut FKF (Festkörperforschung) in Stuttgart, Germany. He received his Ph.D. in applied physics from Stanford University (1997) where he studied magnetic and magneto-electrical transport properties of metallic perovskites as a Hertz Fellow. He was a Senior Member of the Technical Staff in the thermoelectrics group at NASA's Jet Propulsion Laboratory for 9 years (1997-2006) and as a Faculty Associate in materials science at the California Institute of Technology (Caltech) 2006-2014 where he focused on thermoelectric materials and devices. His interests include the discovery of new Zintl phase thermoelectric materials and nanostructured thermoelectric composites using bulk processing, band structure engineering and thermoelectric performance optimization. Dr. Snyder has published over 400 articles, book chapters and patents. He served as treasurer of the international thermoelectric society and vice president of the international thermoelectric academy.



Mazzi (Margaret Anne) Wampamba is a retired civil servant of the United States Government at the National Science Foundation (NSF). She also worked at other U.S. government agencies, i.e. Overseas Private Investment Corporation (OPIC) and the Internal Revenue Service (IRS). At NSF, she worked with scientists in various directorates supporting scientific research funding. She was born in Uganda and attended college in the United Kingdom and France. During her retirement, she continues to support those who seek funding for scientific research especially in materials science. Her main hobby is writing. She has published 3 children's books, one poetry book and her latest novel, *The Virgin Journey*, which is a trilogy.



Francis Nyongesa Wanjala is the academic Chair of the Department of Physics of the University of Nairobi. He obtained his PhD in Physics from the University of Nairobi in 2000. Prof. Francis Nyongesa has published more than 22 research articles in Material Science and Renewable Energy in refereed journals and delivered more than 15 oral presentations in international conferences in the following countries: United States of America (USA), Japan, Germany, Italy, China, South Africa, Ghana, Ethiopia, Uganda, and Tanzania. His research interests include: Functional Materials for Energy Efficient Systems, Solar Energy Materials (Perovskite Solar Cells, Dye Sensitized Solar Cells (DSSCs), and applications of Nanotechnology for Water Purification Systems. He is a recipient of the Third World Academy of Science (TWAS) Award for Young Scientist in 2007 for his contribution in scientific publications in Physics and several fellowships and research grants including: The PASET-RSIF Research Grants Award for PhD Program in 2020, the PASET-RSIF Capacity Building Grants Award in 2020, the National Science, Technology & Innovation (ST&I) Research grant (NACOSTI) in 2012, the U.S-Africa Materials Institute (USAMI) visiting fellowship at Princeton University (USA) in 2008 and the Abdus Salam Young Student Fellowship (Trieste, Italy) in 1999. He is among the founding members of the Global Young Scientists Academy (GYSA). He is a member of African Materials Research Society (AMRS) and the Ultrasonic Nondestructive Testing (NDT) Society of Kenya among others. He has served on the editorial board of the African Journal of Physical Sciences (AJPS) and the Tanzania Journal of Science.



Ireeta Tumps Winston is an Associate Professor and Head of the Department of Physics at Makerere University, with 19 years of Teaching and Research experience. He holds a Ph.D. in Physics and his research is on the Aerial Optical Fibres in Telecommunication Systems: SOP and PMD Monitoring, and Tolerance of Modulation Formats. He is Board Member, African Materials Research Society from August 2019 to date, a member of Optical Society of America (OSA) and, a member of the Institute of Electrical and Electronics Engineers (IEEE), Photonics Society. He is a reviewer for; the South African Journal of Science, the National Research Foundation, South Africa, Optics Letters, an Optical Society of America Journal, the South African Institute of Physics (SAIP), the British Journal of Mathematics and Computer Science.



Iryna Zenyuk is an Associate Professor in Chemical and Biomolecular Engineering Department at University of California, Irvine. She holds a B.S. in mechanical engineering from the NYU Polytechnic School of Engineering. She continued her studies at Carnegie Mellon University, where she earned M.S. and Ph.D. Her graduate work focused on fundamental understanding meso-scale interfacial transport phenomena and electric double layers in fuel cells. Iryna was a postdoc at LBNL (Berkeley Lab) in Dr. Adam Weber's group from 2014 to 2015 investigating water-management in PEFCs using x-ray CT and modeling. She joined Tufts University as an Assistant Professor from 2015-2018 and moved to UC Irvine in 2018. She is also currently a Director of the National Fuel Cell Research Center (NFCRC) where her mission is to accelerate the development and deployment of



fuel cell technology and fuel cell systems. She serves on Alumni Board for Tandon School of Engineering, New York University. Iryna is an Associate Editor of ACS Applied Energy Materials, and Academic Editor of iScience. She hopes to develop technologies to decarbonize difficult sectors, such as chemical manufacturing, aviation, shipping, long-haul transportation to reach net-zero emissions economy by 2050.