Prof. Łukasz Kaczmarek graduated in 2002 from the Faculty of Chemistry of Lodz University of Technology in the top 5% of graduates. In the same year, in December, he began doctoral studies at the Faculty of Mechanical Engineering of TUL. He defended his doctoral thesis with honours in February 2006.

In 2010, he completed international managerial studies- Master of Science in Science and Technology Commercialization (MSSTC) - delivered under an exclusive license granted to Lodz University by the University of Texas at Austin, USA. In 2015, he defended his postdoctoral thesis entitled: "Lightweight, anti-wear functional materials based on aluminium alloys", while in 2020 he was awarded the title of Professor of Engineering Science and Technology.

From 2006 to 2012 he was the Dean's Plenipotentiary for Promotion of the Faculty of Mechanical Engineering. From 2012 to 2018, for two terms, he served as the Vice-Dean for full-time studies of the Faculty of Mechanical Engineering of Lodz University of Technology.

Prof. Ł. Kaczmarek is the co-founder of a spin-off company called Advanced Graphene Products Sp. z o.o. dealing with production and modification of large area graphene.

From 2014 to 2019, he served as the Rector's Innovation Plenipotentiary for Lodz University of Technology's participation in the international Knowledge and Innovation Community (KIC) consortium in the area of "Raw Materials".

As of 2019, he is the Head of the Materials Engineering Discipline and serves as the Director of the Institute of Materials Engineering of TUL.

The present scope of research and interests of prof. Ł. Kaczmarek concerns: (a) the possibility of using light alloys for elements exposed to wear by friction, as well as contact fatigue and (b) techniques for the production of flake graphene, methods for its functionalization in terms of: production of space materials with quasi2D properties, and as nanocomposite materials. He also conducts analyses of phenomena occurring at the molecular level of graphene with the use of quantum chemistry and physics, in relation to the possibility of hydrogen storage, formation of protein structures on graphene - as biological sensors, water filtration phenomena, interaction with the composite matrix.

He conducts this research in close collaboration with research centres such as Mechanical Engineering at Arts et Métiers Paristech, Cluny - France; Karazin University, Harków, Ukraine.  
For his activities he has received the State Decoration of the President of the Republic of Poland - the Bronze Cross of Merit, 5 awards of the Minister of Science and Higher Education, the Economic Award and 20 International Awards.

His scientific output to date has been published in 68 articles including 59 from the Journal Citation Reports - JCR list and presented in over 35 communications, presentations and speeches at national and international conferences. He has co-authored 13 patents including 4 US patents and 5 patent applications.

Additionally, he is the co-author of a technological solution entitled "Technology of carburizing steel products at reduced pressure together with a method of computer-aided design of parameters of the carburized layer", which in 2007 received the Governor of Lodz Award in the field of invention.

To date, prof. Ł. Kaczmarek has been the manager of 4 projects and a participant in 13 research projects. He also coordinated the international LightMat4Space project related to the development of a material for a lightweight robotic arm designed to operate in weightless conditions.

He uses his experience and knowledge, among others, as an expert appointed by NCBR within Bridge Alpha Funds, where he supervises the proper functioning of projects with a high risk of implementation. He is also an expert of the Polish Agency for Enterprise Development. He also implemented the Foresight Program POLSKA 2020 as one of the experts - New Materials and Technologies.

Since 2019 he has been holding the position of Vice-Dean for Development.