Brief information about the project

Name of the project	Modification of Solid Electrodes by Electrochemical Synthesis of Molecular Bioimprint Polymer (MBIP)
Relevance	There are few studies in the literature on the preparation of sensitive layers for selective recognition and electrochemical detection of diclofenac using molecular imprinting technology. This project assumes fundamental research to optimize the process of electrochemical synthesis on the surface of solid electrodes of a hybrid material based on a molecular imprint polymer (MIP) in combination with DNA and metal/metal oxide nanoclusions, which will help to obtain a selective sensitive material to DCF.
Purpose	The aim of the work is to obtain new materials based on molecular bioimprinted polymer by electrochemical method.
Objectives	1 Electrochemical synthesis of a polymer-metal oxide nanocomposite on solid substrates 2 Electrosynthesis of MBIP on the surface of solid electrodes and study of its electrochemical properties 3. Optimization of the electrodeposition process of a molecular bioimprinted polymer based on studies of the electrochemical and morphological properties of the hybrid material
Expected and achieved results	The processes of electrochemical synthesis of certain functional monomers with nanoparticles in the presence of a template molecule and DNA on various substrates and the removal of a template molecule from the matrix mastered. Optimal conditions for obtaining a new sensitive material with the required sensory and morphological properties will be identified based on the results of physico-chemical studies.
Research team members with their identifiers (Scopus Author ID, Researcher ID, ORCID, if available) and links to relevant profiles	Rakhymbay Gulmira Author ID в Scopus - 56436642400 Researcher ID Web of Science - A-5356-2015 ORCID ID- 0000-0002-8814-9752 https://www.scopus.com/authid/detail.uri?authorId=56436642400 https://www.webofscience.com/wos/author/record/825115
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