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Ayub Karimzadeh, Mohammad Hasanzadeh, Nasrin Shadjou, Miguel de la Guardia

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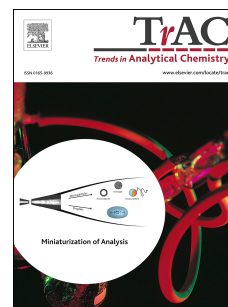
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Peptide based biosensors

Ayub Karimzadeh ^a, Mohammad Hasanzadeh ^{b*}, Nasrin Shadjou ^c, Miguel de la Guardia ^d

^a Pharmaceutical Analysis Research Center, Tabriz University of Medical Sciences, Tabriz 51664, Iran.

^b Drug Applied Research Center, Tabriz University of Medical Sciences, Tabriz 51664, Iran.

^c Nanotechnology Research Center, Urmia University, Urmia, Iran.

^d Department of Analytical Chemistry, University of Valencia, Dr. Moliner 50, 46100 Burjassot, Valencia, Spain.

Corresponding authors:

E-mail address:

(*) hasanzadehm@tbzmed.ac.ir

Tel.: +98 914 3619877; fax: +98 41133632312.

Abstract

This review provides an overview of the various types of (bio)sensors based on peptides for their analytical use, along with significant advances over the last several years in related technologies. So, it will be described: **i**) principles in biosensing using peptides **ii**) aspects of fabrication in the perspective of (bio)sensing applications **iii**) potential of electrochemical, electrochemiluminescence, photoelectrochemical, and optical (bio)sensors for the determination of target analytes within sub-nanomolar range also discussing the main problems in (bio)sensing **iv**) multiplex electrochemical and optical (bio)sensors, both with and without labels. **v**) Latest developments in the applications of (bio)sensors methods for detection of important analytes in real samples. **vi**) the application of nanotechnology and microfluidic technology on peptide based biosensing.

Keywords: peptide, biosensing, cancer; immunosensing; tumor biomarkers; nanoscience and nanotechnology; biotechnology; multiplex sensor; modified electrode; nucleic acid; protein; enzyme; electrochemistry

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