Mini Review

Biosensors Based on Semiconductors, a Review

Miroslav Pohanka^{1*} and Jan Leuchter²

¹ Faculty of Military Health Sciences, University of Defense, Trebesska 1575, Hradec Kralove, Czech Republic;

² Faculty of Military Technology, University of Defense, Brno, Czech Republic

*E-mail: miroslav.pohanka@gmail.com

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Semiconductors are important materials in the current technology where they are implemented to electronic devices as attenuators but they can play also a role as sensors. In the current review, semiconductors are presented as a platform for the construction of biosensors and biosensor like devices serving as detectors in the analytical chemistry. Biosensors using ion sensitive field effect transistors, light addressable potentiometric sensors and analytical devices based on quantum dots are presented here. Survey of the current literature is provided and discussion about each analytical method is given here. Future trends in the biosensors based on semiconductors are also outlined.

Keywords: biosensor; immunosensor; ion sensitive; field effect transistor; light addressable potentiometric sensor; potentiometry; quantum dot

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