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Title:	Insights on the polypyrrole based nanoformulations for photodynamic therapy
Authors:	Banerjee, Uttam Chand (/jspui/browse?type=author&value=Banerjee%2C+Uttam+Chand)
Keywords:	antimicrobial photodynamic therapy phthalocyanines
Issue Date:	2021
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Citation:	Journal of Porphyrins and Phthalocyanines, 25(07n08), 605–622.
Abstract:	This review is written to endow updated information on polypyrrole based photosensitizers for the treatment of deadly diseases such as cancer and microbial infection. Tetrapyrrolic macromolecules such as porphyrins and phthalocyanines hold unique photophysical properties which make them very useful compounds for various biomedical applications. Besides their properties, they also have some limitations such as low water solubility, bioavailability, biocompatibility and lack of specificity, etc. Researchers are trying to overcome these limitations by incorporating photosensitizers into the different types of nanoparticles and improve the quality of photodynamic therapy. We have contributed to this field by synthesizing and developing polypyrrolic photosensitizer based nanoparticles for potential applications in antimicrobial and anticancer photodynamic activity. Throughout this review, newly synthesized and existing PSs conjugated/encapsulated/doped/incorporated with nanoparticles are emphasized, which are essential for current and future research themes. Also in this review, we briefly summarized the research work carried over the past few years by considering the porphyrin based photosensitizers as alternative therapeutic entities for the treatment of microbial infections, cancers, and many other diseases.
Description:	Only IISER Mohali authors are available in the record.
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