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Nano diamond surface modification and technology development of a high dose non-steroidal anti-inflammatory drug contained in a medical patch

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Detonation Nano Diamond (ND) is receiving much attention due to its remarkable mechanical, electrical and thermal properties, facile surface tailoring, narrow size distribution of primary particles and high biocompatibility. The rich surface chemistry of ND, the absence of toxic impurities and small size make ND a promising material for biomedical and technical applications. In this research, potential of ND in drug delivery has been demonstrated many times for a variety of compounds. The most important advantages of ND as a drug delivery vehicle stem from its strong physical adsorption controlled by the surface functional groups as well as a wide surface area of ND that is ideal for conjugating various biochemical substances. A high loading capacity of non-steroidal anti-inflammatory drugs (NSAID) was discussed with using lower concentration of ND.

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