عنوان مقاله:

Using carbon dots as an emerging Nanoagents in biomedicaland healthcare applications

محل انتشار:

اولین کنفرانس بین المللی و چهارمین کنفرانس ملی تجهیزات و فناوری های آزمایشگاهی (سال: 1402)

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خلاصه مقاله:

Carbon dots (CDs) provide distinctive advantages of strong fluorescence, good photostability, high water solubility,and outstanding biocompatibility, and thus are widely exploited as potential imaging agents for in vitro and invivo bioimaging. Imaging is absolutely necessary when discovering the structure and function of cells, detectingbiomarkers in diagnosis, tracking the progress of ongoing disease, treating various tumors, and monitoring therapeuticefficacy, making it an important approach in modern biomedicine. Numerous investigations of CDs havebeen intensively studied for utilization in bioimaging-supported medical sciences. However, there is still no articlehighlighting the potential importance of CD-based bioimaging to support various biomedical applications. Herein,we summarize the development of CDs as fluorescence (FL) nanoprobes with different FL colors for potentialbioimaging-based applications in living cells, tissue, and organisms, including the bioimaging of various cell typesand targets, bioimaging-supported sensing of metal ions and biomolecules, and FL imaging-guided tumor therapy.

کلمات کلیدی:

Carbon dots (CDs), fluorescence, bioimaging, therapy, sensing

لینک ثابت مقاله در پایگاه سیویلیکا: