

Two-photon absorption and the design of two-photon dyes.

Autorzy

Miłosz Pawlicki

H. A. Collins

R. G. Denning

Harry L. Anderson

Rok wydania

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Streszczenie

Two-photon absorption has important advantages over conventional one-photon absorption, which has led to applications in microscopy, microfabrication, three-dimensional data storage, optical power limiting, up-converted lasing, photodynamic therapy, and for the localized release of bio-active species. These applications have generated a demand for new dyes with high two-photon absorption cross-sections. This Review introduces the theory of two-photon absorption, surveys the wide range of potential applications, and highlights emerging structure–property correlations that can serve as guidelines for the development of efficient two-photon dyes.

Słowa kluczowe

chromophores, photodynamic therapy, porphyrinoids, two-photon absorption, uncaging

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