



## Amplified spontaneous emission of Rhodamine 6G embedded in pure deoxyribonucleic acid

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Auteur	Rau, Ileana [1], Szukalski, A. [2], Sznitko, Lech [3], Miniewicz, Andrzej [4], Bartkiewicz, Stanislaw [5], Kajzar, François [6], Sahraoui, Bouchta [7], Mysliwiec, Jaroslaw [8]
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Résumé en anglais	Deoxyribonucleic acid (DNA) is commonly viewed as a genetic information carrier. However, now it is recognized as a nanomaterial, rather than as a biological material, in the research field of nanotechnology. Here, we show that using pure DNA, doped with rhodamine 6G, we are able to observe amplified spontaneous emission (ASE) phenomenon. Moderate ASE threshold, photodegradation, and reasonable gain coefficient observed in this natural host gives some perspectives for practical applications of this system in biophotonics. Obtained results open the way and will be leading to construction of truly bio-lasers using nature made luminophores, such as anthocyanins.
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