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Antibacterial Intelligent Amphiphiles

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PURPOSE OF THE ABSTRACT

The emergence of nosocomial MDR (Multi-Drug Resistant) bacterial strains is a growing concern in hospitals and underline the urgent need for the development of innovative antibacterial agents. [1] If azo materials have a large amount of applications (we can cite for example their use as surfactants,[2?4] in catalysis,[5] as gelators,[6] liquid crystals,[7,8] etc?), azo-amphiphiles recently proved to exhibit a powerful biocide potential.[9] The main point of these molecules is their capability to isomerize from trans to cis form, reversibly, by light or heat. Moreover, these azo-amphiphiles can particularly come from phenols, which are usually used as starting material for their formation. So, after having selected the most active model family of the envisioned azo-molecules thanks to a novel biophysics /microbiology /physico- and organic-chemistry approach, we synthesized novel antibacterial agents using natural-occurring phenols.

FIGURES

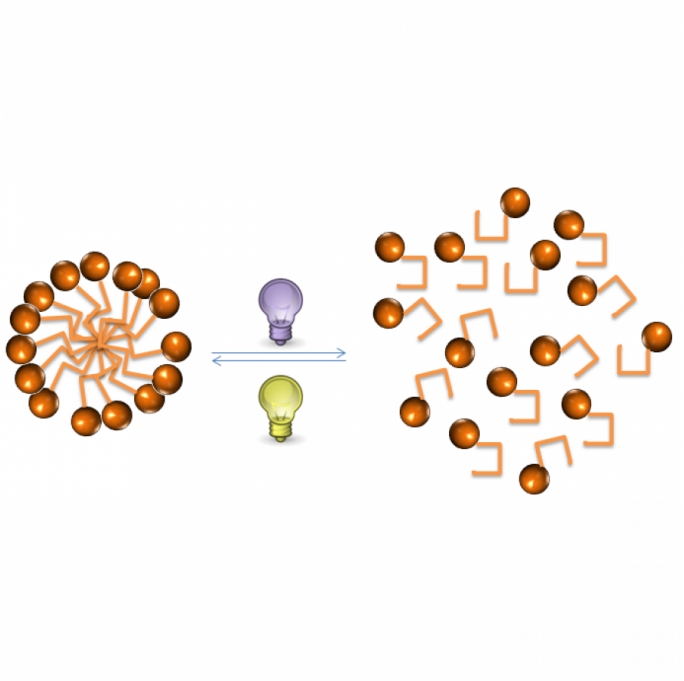

FIGURE 1

Figure 1

azo-molecules application in micellar media[2,3]

FIGURE 2

KEYWORDS

Azobenzene | Biocides | Phenols

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