



# Fluorescent Self-Assembled Mono layers of Umbelliferone: A Relationship between Contact Angle and Fluorescence

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Résumé en anglais	Self-assembled monolayers (SAMs) that contain fluorophore units are nowadays widely used to tune surface properties and design new chemical sensor chips. It is well-known that the nature of the substrate may strongly interfere with the emission properties of the grafted molecules, but the organization of the monolayer may also have an important role. To study the influence of the SAM organization on the luminescence properties, we prepared different coumarin-based derivatives endowed with tethered chains of different lengths and elaborated the corresponding SAMs on glass slides. Besides SAM structural characterizations by atomic force microscopy and X-ray reflectivity, we carried out contact angle measurements and applied the Van Oss-Chaudhury-Good theory, which was rarely used previously for self-assembled monolayers. As expected, by increasing the tethered chain length, a higher surface coverage, a higher degree of organization, and a stronger molecular packing were observed. However, it appears to facilitate the self-quenching process, and thus, this strongly affects the fluorescent properties of the SAMs.
URL de la notice	<a href="http://okina.univ-angers.fr/publications/ua2729">http://okina.univ-angers.fr/publications/ua2729</a> [19]
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## Liens

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