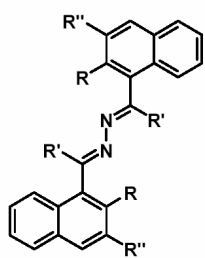



# Crystal Structures of Fluorescent Bisazomethine Pigments

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Pigment Yellow 101 (**1**) is a well-known greenish-yellow fluorescent organic pigment. The compounds **1-5** were synthesized and crystallized from DMSO, xylene and CH<sub>3</sub>OH/C<sub>2</sub>H<sub>5</sub>OH mixtures resp. The crystal structures of compounds **1-4** were determined by single crystal X-ray structure analysis. Compound **5** was determined from scratch by X-ray powder diffraction.

From the crystal structures it is not evident why the compounds **1**, **3**, and **5** are fluorescent but **2** and **4** are not. Thus extensive quantum mechanical calculations have been made and the reason for the fluorescence quenching of **2** and **4** was finally found [1].

	Compound	1	2	3	4	5
	P.Y.101					
	R	OH	OCH <sub>3</sub>	OH	H	OH
	R'	H	H	CH <sub>3</sub>	H	H
	R''	H	H	H	H	
	Solid state fluorescence	yes	no	yes	no	yes

[1] Dreuw A., Wachtveitl J., Brüning J., Schmidt M. U., *in preparation*.

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