

## SUPPORTING INFORMATION

**Reply to the 'Comment on "Designing potentially singlet fission materials with an anti-Kasha behaviour"' by K. Jindal, A. Majumdar and R. Ramakrishnan, Phys. Chem. Chem. Phys., 2025, 27, DOI: 10.1039/D4CP02863E**

Ricardo Pino-Rios<sup>\*a</sup>, Rodrigo Báez-Grez<sup>a,b</sup>, Dariusz W. Szczepanik<sup>c</sup> and Miquel Solà<sup>\*d</sup>

<sup>a</sup> *Instituto de Ciencias Exactas y Naturales (ICEN), Universidad Arturo Prat, Playa Brava 3256, 1111346, Iquique, Chile. rpinorios@unap.cl.*

<sup>b</sup> *Facultad de Ciencias, Universidad Arturo Prat, Casilla 121, Iquique 1100000, Chile.*

<sup>c</sup> *K. Guminski Department of Theoretical Chemistry, Faculty of Chemistry, Jagiellonian University, Poland.*

<sup>d</sup> *Institut de Química Computacional i Catàlisi (IQCC) and Departament de Química, Universitat de Girona, C/ Maria Aurèlia Capmany 69, 17003 Girona, Catalonia, Spain. miquel.sola@udg.edu*

**Table S1.** Excitation energies for the ghost states computed at the TD-LC- $\omega$ HPBE/6-311G(d,p)//B3LYP/6-311G(d,p) level for substituted azulenes.

Position <sup>a</sup>	Ghost state energy (cm <sup>-1</sup> )	Position <sup>a</sup>	Ghost state energy (cm <sup>-1</sup> )
Azulene	1692.8	OH8b	-3029.2
CN1	4881.7	OH12a	8286.8
CN2	3550.2	OH12b	9337.7
CN6	-5789.9	OH13	-3438.1
CN7	-3700.2	OH48	-4071.2
CN8	-5972.9	OH56a	3769.6
CN12	5473.7	OH56b	12846.7
CN13	7100.4	OH57	5429.4
CN47	-7191.6	OH58	2767.9
CN48	-8209.4	OH68	3893.8
CN57	-4902.7	OH78	5301.9
CN67	-6621.4	OH123	11790.2
CN68	-7870.6	OH456	6045.5
CN78	-6965.7	OH457a	-5286.6
CN123	7196.4	OH458a	10194.2
CN457	-7632.7	OH467	7014.1
CN458	-8939.2	OH468	10569.2
CN467	-8596.5	OH478	9309.4
CN468	-9350.6	OH567	16283.2
CN567	-7098.8	OH568	10894.2
CN678	-8460.2	OH578	1467.8
CN4578	-9290.1	OH678	11241.0
CN4678	-9879.6	OH4567	4981.8
CN5678	-8874.7	OH4568a	8682.8
CN45678	-10149.8	OH4578	7422.2
OH1a	417.0	OH4678	12785.4
OH1b	-3658.3	OH5678	7704.5
OH2	1654.9	OH45678	13359.7
OH6a	7829.5		

<sup>a</sup> In the OH-substituted compounds, isomers a and b are observed; these are relative to the position of the hydrogen in -OH but do not change considerably the final result.