Supplementary Information:

In a classic study Houk and Munchausen^{35(a)} have demonstrated that changes in IP and EA values of dienophiles (induced by different substitutions) can be used to predict their reactivity trends in Diels-Alder (DA) reactions. The IP and EA values of the chosen dienes and dienophiles in the present study are reported in Tables S1 and S2, respectively.

Table S1: IP values (in eV) of the chosen Diels-Alder pairs are generated at MP2(FC)/6-31G(D,P) level.

Dienes	IP (eV)
	8.86
CH ₃	8.64
CH ₂ CH ₃	8.42
CH ₃	8.47
н ₃ с сн ₃	8.26
	8.41
OCH3	7.83
N(CH ₃) ₂	7.37
Си	10.08

Dienophiles	IP (eV)
	12.73
CO2CH3	10.50
сно	10.20
Си	11.27
NO2	11.24
ис си	12.40
ис си	13.34
ис си	14.30
СН3	9.64
	11.10
осн3	8.65
N(CH ₃) ₂	7.82

Table S2: EA values (in eV) of the chosen Diels-Alder pairs are generated at MP2(FC)/6-31G(D,P) level.

Dienes	EA (eV)
	-2.17
CH ₃	-2.24
CH₂CH₃	-2.16
CH ₃	-2.25
H ₃ C CH ₃	-2.29
	-2.70
ОСН3	-2.46
N(CH ₃) ₂	-2.63
N C	-0.82

Dienophiles	EA (eV)
	-3.85
CO ³ CH ³	-1.77
сно	-1.47
Си	-1.72
NO2	-1.07
ис си	-0.24
NC CN	0.70
ис си	1.26
CH3	-3.91
	-5.69
ocH3	-4.12
N(CH ₃) ₂	-4.23