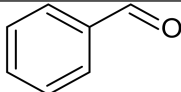
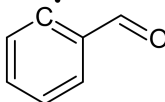
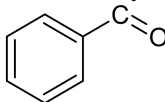
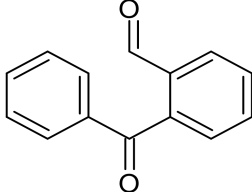
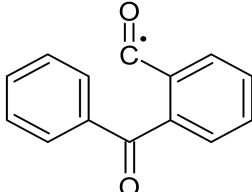
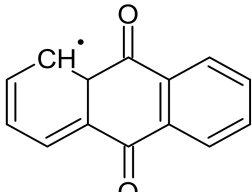
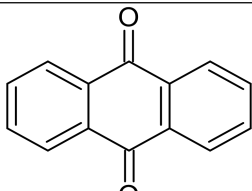
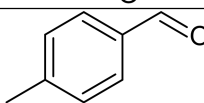
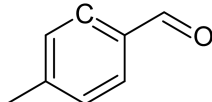
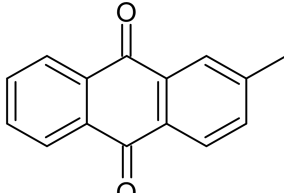
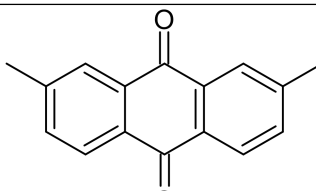
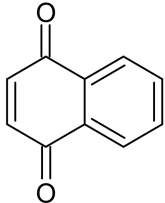
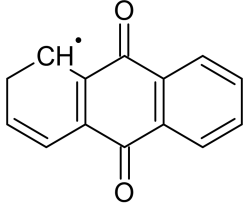
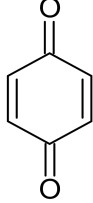

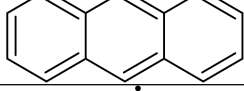
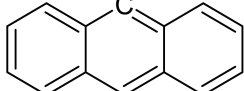
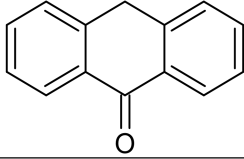
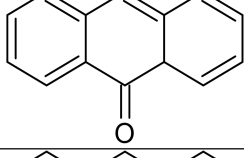
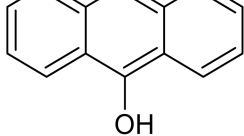
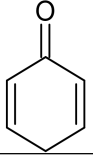
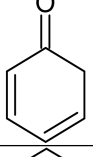
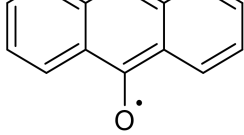
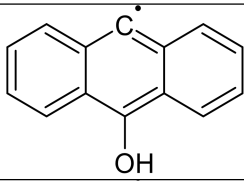
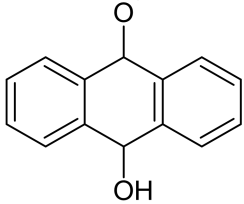
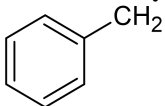
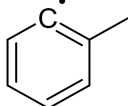
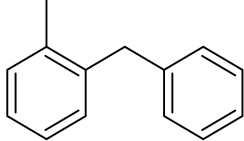
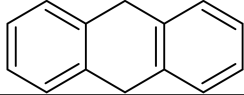
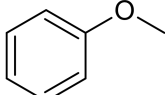
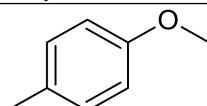
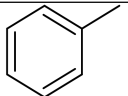


Table S4. A summary table of names, nomenclature in the mechanism, and chemical structures of the selected species in the manuscript.

Name	Nomenclature in the model	Structure
Benzaldehyde	C_6H_5CHO	
2-Formylphenyl	C_6H_4CHO	
Benzoyl	C_6H_5CO	
2-Benzoylbenzaldehyde	$A_1-CHO-CO-A_1$	
2-Benzoylbenzoyl	$A_1-CO-CO-A_1$	
9,10-Anthraquinonyl	ATQuinonyl	
Anthraquinone; 9,10-Anthraquinone	ANTHRQNONE	
Methylbenzaldehyde	$CH_3C_6H_4CHO$	
Formyl methylphenyl	$CH_3C_6H_3CHO$	
Methylantraquinone	$CH_3ATQ910$	
Dimethylantraquinone	$CH_3ATQ910CH_3$	

p- Naphthoquinone; 1,4-Naphthoquinone	P-OA ₂ O	
9,10-dioxo-1,2,9,10-tetrahydroanthracen-1-yl	ATQ-H	
p-benzoquinone; 1,4-benzoquinone	P-C ₆ H ₄ O ₂	
o-Benzyne	C-C ₆ H ₄	
Anthracene	ANTHRACENE	
Anthracenyl	RANTHRACENE1	
Anthrone	ANTHRONE	
1,8- dehydroxy- 9- anthron	DHY18ANTHRON	
Anthracenol	ANTHRACENOL	
2,5- cyclohexadienone	C ₆ H ₆ O-25	
2,4- cyclohexadienone	C ₆ H ₆ O-24	
Anthracenoxy	ANTHRACENEOJ1	

10-hydroxyanthracen-9-yl	RANTHRACENOL	
(10-hydroxy-9,10-dihydroanthracen-9-yl)oxidanyl	P-OANTHRCNOH	
Benzyl	$C_6H_5CH_2$	
Methylphenyl	$C_6H_4CH_3$	
Benzyltoluene	O-BNZYLTOLN	
Dihydroanthracene	DHYANTHRACENE	
Anisole	$C_6H_5OCH_3$	
4-Methylanisole	$pCH_3C_6H_4OCH_3$	
Toluene	$C_6H_5CH_3$	
Ethylbenzene	$C_6H_5C_2H_5$	