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N-aryl benzisoselenazolones – synthesis, transformations and antioxidant activity

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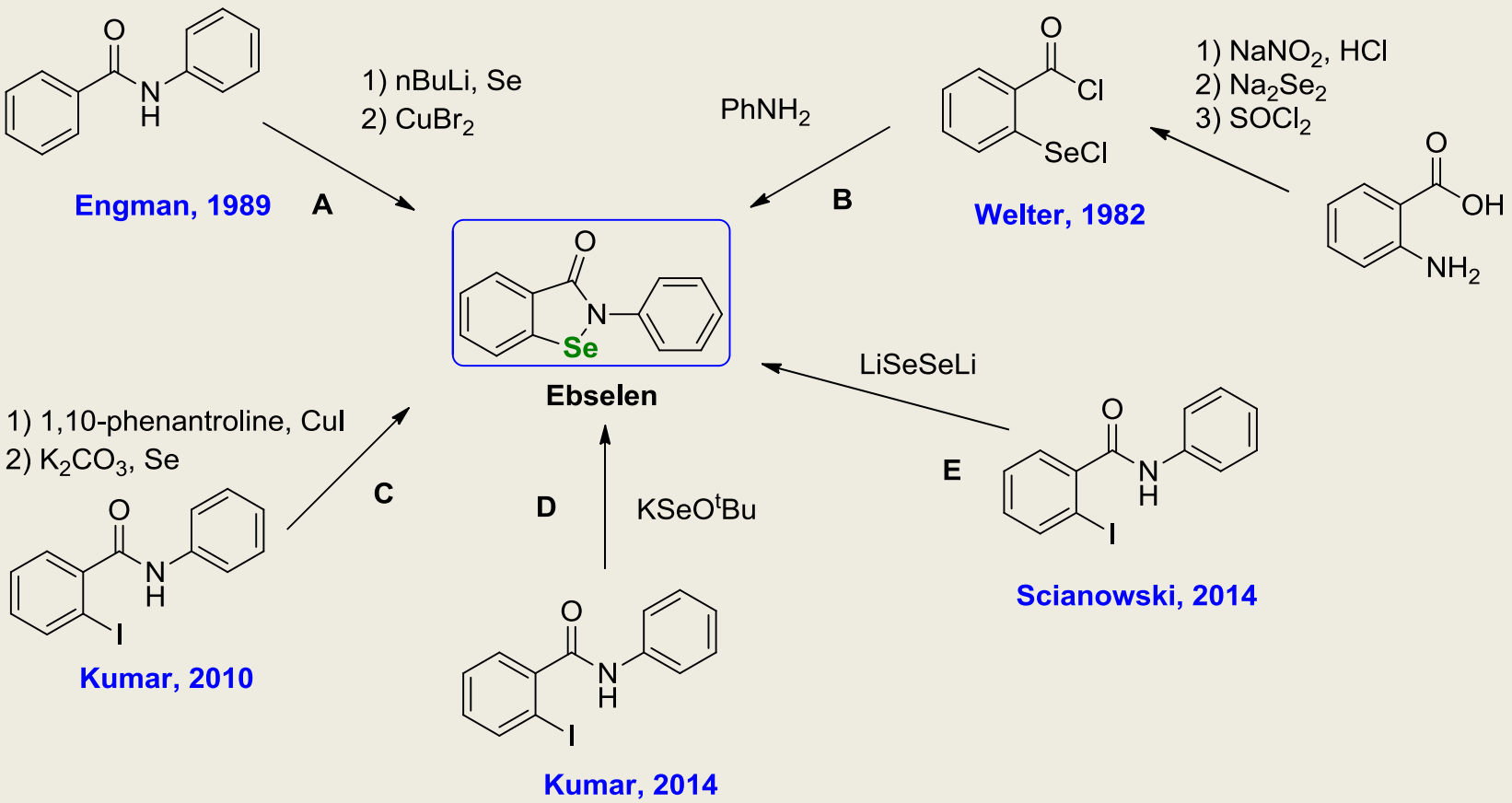
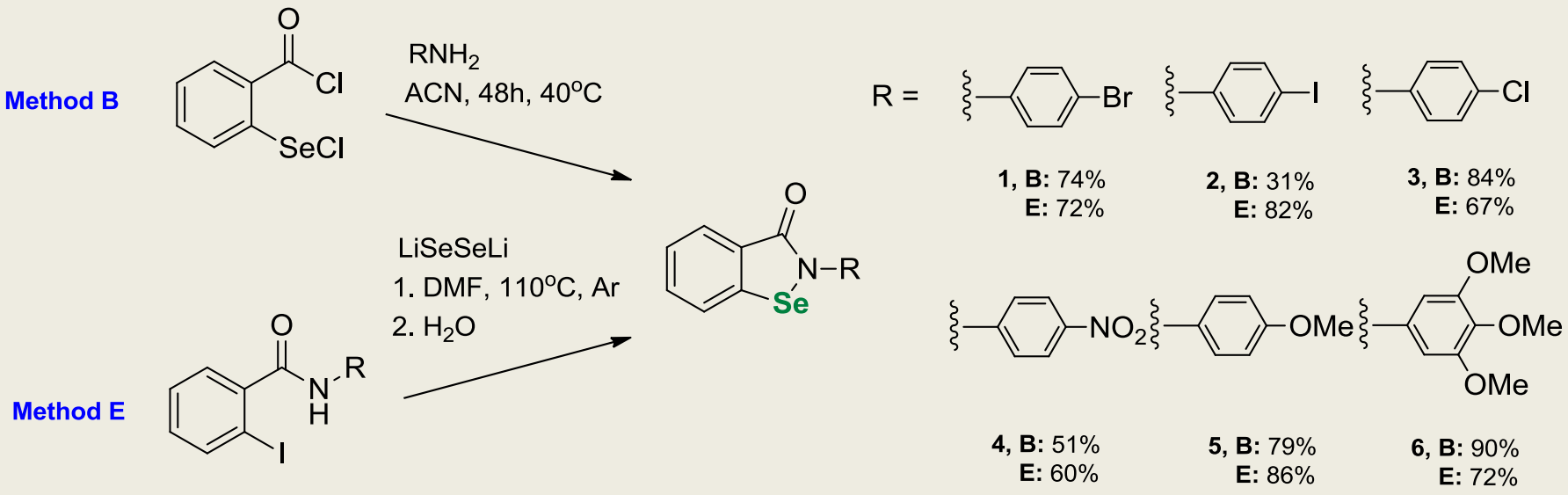
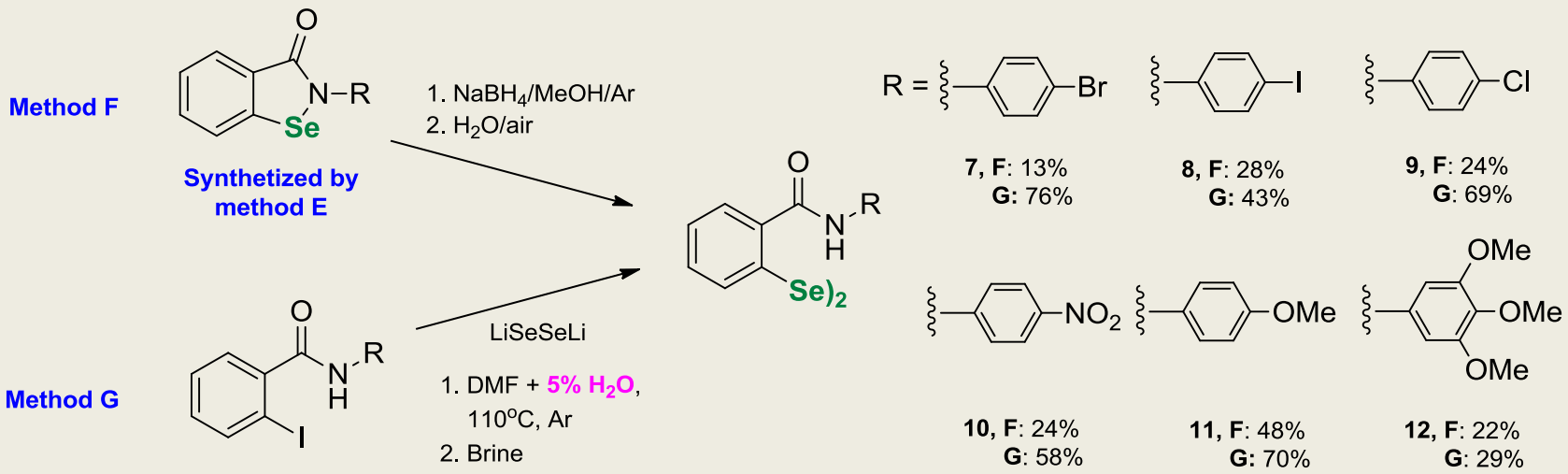
Methods of ebselen synthesis (A-E)

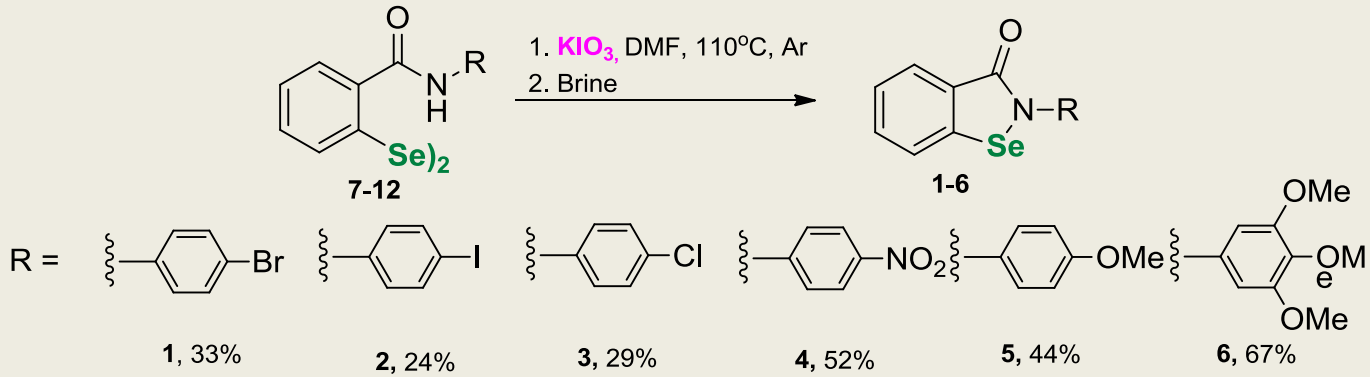


Synthesis of ebselen derivatives 1-7 using procedure B and E

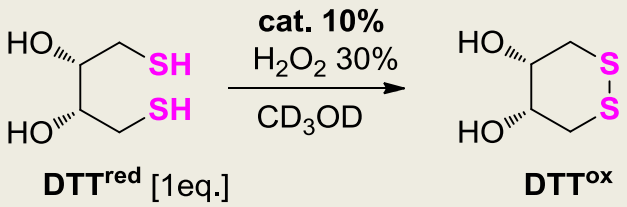


Synthesis of diselenides 7-12 (Methods F and G) and oxidative regeneration of Se-N bond





Antioxidant activity of the tested catalysts



DTT^{red} [1eq.] **DTT^{ox}**

	Remaining Dithiotreitol [%]				
Catalyst [0.1 equiv.]	3 min	5 min	15 min	30 min	60 min
Benzisoselenazolones					
1	86	83	79	75	71
2	**42**	**0**	**0**	**0**	**0**
3	78	68	50	38	36
4	25	7	5	0	0
5	64	41	5	0	0
6	**5**	**0**	**0**	**0**	**0**
Ebselen	84	75	64	58	52
Diselenides					
7	81	72	55	41	23
8	89	83	81	78	74
9	61	53	26	19	21
10	**100**	**0**	**0**	**0**	**0**
11	84	73	63	57	52
12	96	82	41	6	0