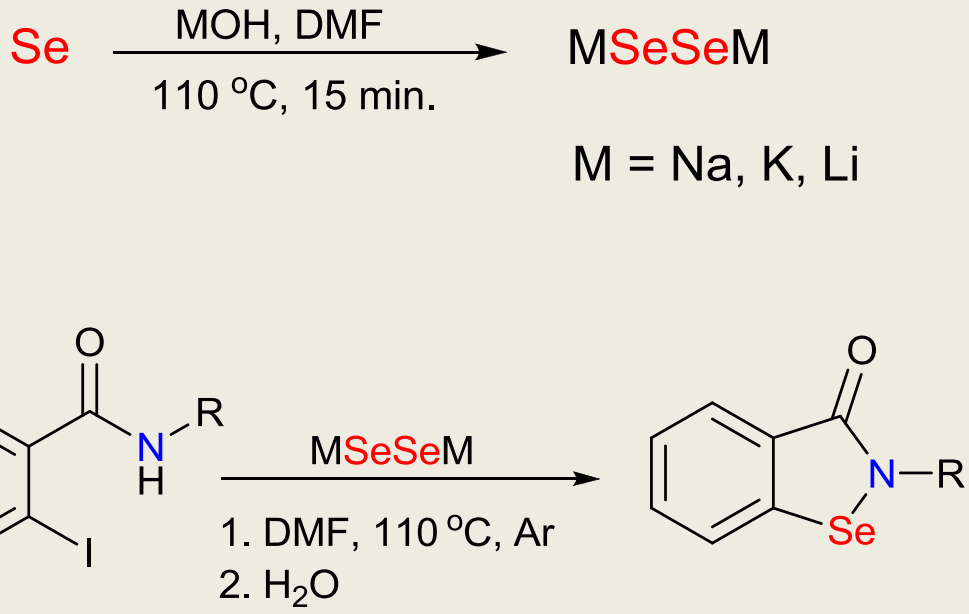
Department of Organic Chemistry
Nicolaus Copernicus University, Torun, Poland

Ebselen-like catalysts – new approach

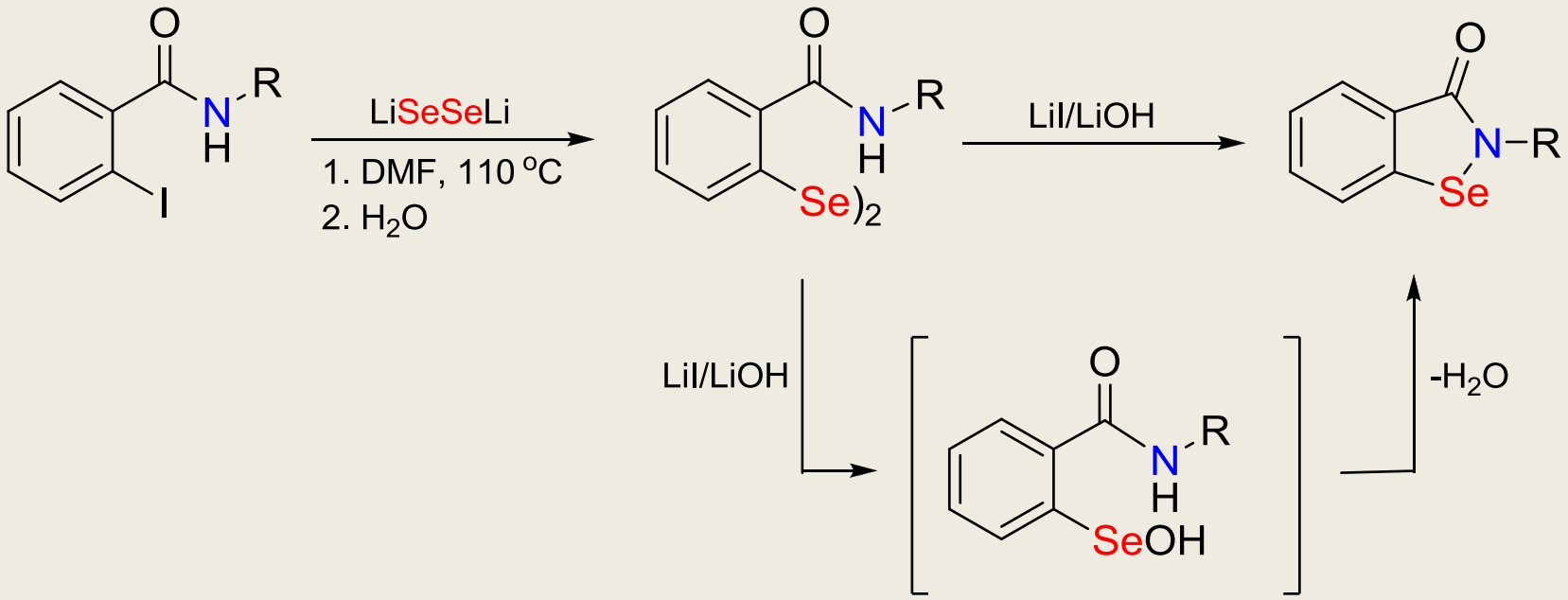
Jacek Ścianowski and Agata Pacuła

New method for the synthesis of 1,2-benzisoselenazol-3(2H)-ones

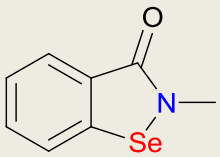


M	Yield [%]
Na	69
K	75
Li	91

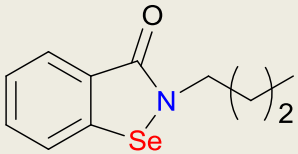
Mechanism of Se-N formation



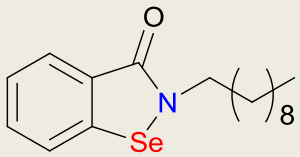
Obtained *N*-substituted 1,2-benzisoselenazol-3(2H)-ones



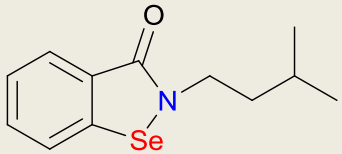
(59%)



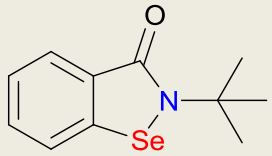
(82%)



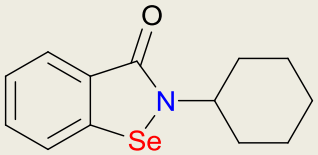
(70%)



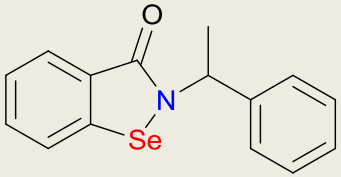
(98%)



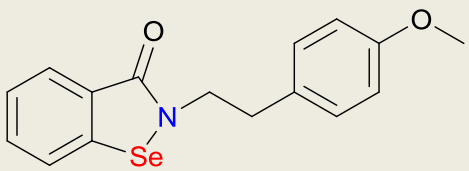
(92%)



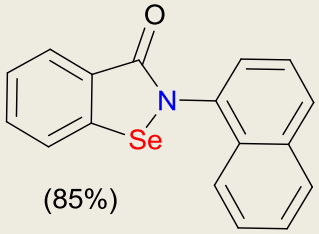
(88%)



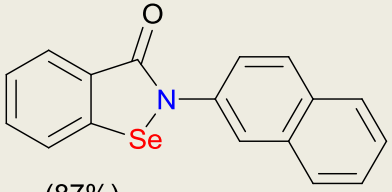
(75%)



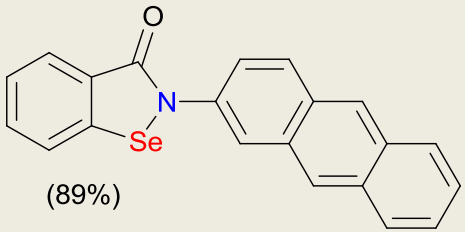
(85%)



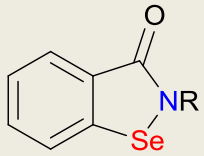
(85%)



(87%)

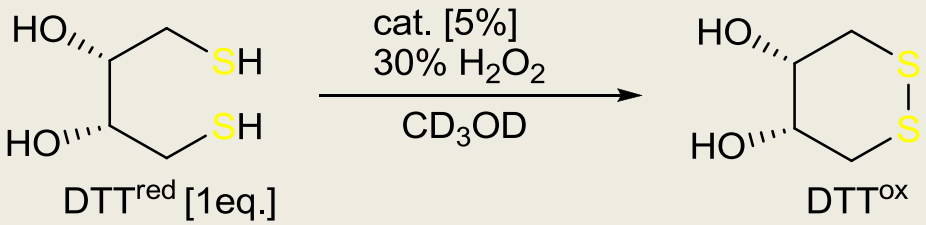


(89%)

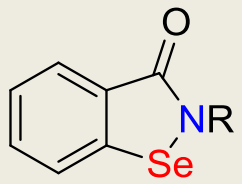


R = $C_6H_4NO_2$ (60%)
C_4H_4Br (72%)
C_4H_4I (82%)
C_4H_4OMe (86%)

Selected catalysts of high antioxidant activity



Catalyst



	Substrate concentration [%]				
Catalyst [5 %]	3 min	5 min	15 min	30 min	60 min
R = Ph (Ebselen)	96	95	94	90	88
R =C_6H_4OMe	76	66	59	22	12
R =$C_6H_4NO_2$	87	75	51	29	0
R =C_6H_4I	76	57	19	9	0