**PEG mediated synthesis of 6-pyrazinyl- / fused pyrazinylquinazolin-4(3*H*)-ones using Castro-Stephen coupling, oxidation and cyclocondensation reactions**

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Scheme 1. Preparation of 1-(3-methyl-4-oxo-2-phenyl-3,4-dihydroquinazolin-6-yl)-2-phenylethane-1,2-dione (**6**).



Scheme 2. Proposed mechanism for oxidation of 3-methyl-2-phenyl-6-(phenylethynyl)quinazolin-4(3*H*)-one using potassium permanganate in PEG-400.



Scheme 3. Synthesis of 3-methyl-2-phenyl-6-pyrazinyl / fused pyrazinylquinazolin-4(3*H*)-ones (**8** and **10**).



Scheme 4. Synthesis of 3-methyl-2-phenyl-6-fused pyrazinylquinazolin-4(3*H*)-one regioisomers (**12a-f** and **12a’-f’**).