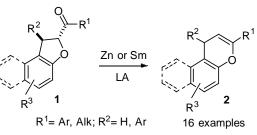
Zn- AND Sm-INDUCED REDUCTIVE REARRANGEMENT OF 2-ACYL-2,3-DIHYDROBENZOFURANS INTO 4*H*-CHROMENES

Dmitry V. Osipov, Vitaly A. Osyanin, Maxim R. Demidov, Yury N. Klimochkin

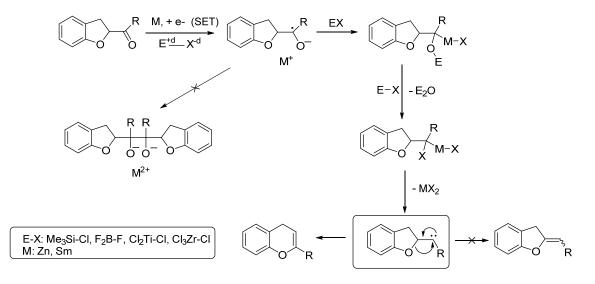
Samara State Technical University, 443100 Samara, Russia

Reductive electron transfer as a part of synthetic transformations has become a versatile tool in the synthesis of heterocycles. Many ring-forming processes were developed that involve *SET* from zero-valent metal reductants to organic substrates to form metal-

associated ketyls or metallocarbenoids. However, ring-opening/closure reactions remain a far less studied area. We have developed a convenient low-cost method for formal 1C ring expansion of 2-acyl-2,3dihydrobenzofurans 1 under reductive conditions (Zn or Sm and high oxophilic Lewis acid).



Zn- or Sm-induced reaction begins with the generation of metal-coordinated ketyl radical species via *SET* from metal, which is further transformed into carbenoid or carbene. They can then undergo either insertion into a neighboring C–H bond with formation of 2-alkylidene-2,3-dihydrobenzofurans or alkoxy migration to the carbene center can occur. In all cases, however, the only products found were 4*H*-chromenes as a result of 1,2-alkoxy shift. Dimerization of ketyl radicals is prohibited by steric factors and reductive coupling of ketones to pinacols is not also observed.



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