**meta-Chloroperoxybenzoic Acid (m-CPBA)**

Anton Merkushev was born in Perm, Russian Federation, in 1989. He obtained his B.Sc. (2011) and M.Sc. (2013) in organic chemistry at Perm State University, Perm. Currently, he is working towards his Ph.D. in the Institute of Technical Chemistry UB RAS under the supervision of Professor Dr. Alexander Butin. His research interests are focused on oxidative transformations of furan substrates.

**Introduction**

*meta*-Chloroperoxybenzoic acid (m-CPBA) is a white crystalline powder with a melting point of 90 °C. In pure form, it can be detonated by shock or by sparks, and therefore it is stored as a mixture containing less than 72% m-CPBA (containing water and *meta*-chlorobenzoic acid). It is soluble in dichloromethane, chloroform, ethyl acetate, alcohol, and insoluble in hexanes, carbon tetrachloride, and water. m-CPBA is obtained by the reaction of *meta*-chlorobenzoyl chloride with a basic solution of hydrogen peroxide in the presence of MgSO₄·7H₂O.

m-CPBA is used as oxidizing agent in Baeyer–Villiger oxidations and in the synthesis of epoxides, oxaziridines, α-diisulfines, sulfoxides and sulfones, N-oxides, and ketones.

**Table 1** Use of m-CPBA

<table>
<thead>
<tr>
<th>Example</th>
<th>Reaction Product</th>
<th>Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Troisi and co-workers developed a new synthetic pathway to sulfonylamidic azobenzene derivatives based on the oxidation of 2,3-dihydrobenzothiadiazines with m-CPBA. It was shown that high yields were achieved when three equivalents of the peroxyacid were used.</td>
<td>Cl₂CH₂Cl, CH₂Cl₂, r.t., 5 min</td>
</tr>
<tr>
<td>B</td>
<td>Recently, Kitamura et al. found that oxidative fluorination of 1,3-dicarbonyl compounds with hydrofluoric acid is efficiently performed with the use of stoichiometric amounts of m-CPBA. It is worth noting that a catalytic amount of iodoarene is needed for the reaction to proceed.</td>
<td>ArI (20 mol%) DCE, 40 °C 55% aq HF, m-CPBA (1.5 equiv)</td>
</tr>
<tr>
<td>C</td>
<td>Bovenkerk and Esser showed that the oxidation of different benzofurans with m-CPBA afforded diketones, that were used as precursors for 2-aniline-substituted isoindoles.</td>
<td>CH₂Cl₂, r.t. 5 min</td>
</tr>
</tbody>
</table>
Acknowledgement

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References

(13) Rodríguez, A.; Moran, W. J. Synlett 2013, 24, 102.