



Correction to: 1*H*-imidazol-3-ium tricyanomethanide {[HIM]C(CN)₃} as a nanostructured molten salt catalyst: application to the synthesis of pyrano[4,3-*b*]pyrans

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Since it has been cleared that a fake compound has been sold to us as cyanoform, and since we have unintentionally used this fake compound for preparation of the catalyst, therefore, we prepare an Erratum on our published paper. The reported errors are including the procedure for the synthesis of catalyst and its characterization part. These errors were corrected by applying a known alternative method for the synthesis of catalyst [1]. Also, we corrected our reported data in the case of the optimization of reaction conditions and the scope of the reported protocol for the synthesis of target molecules. According to these amendments, the authors acknowledge that the mentioned paper has been corrected.

In this, according to the Banert's suggestion for providing a fundamental correction and based on their procedure [1], we prepared 1*H*-imidazol-3-ium tricyanomethanide by applying potassium tricyanomethanide [2–4]. The new optimized reaction conditions is where the model reaction for the synthesis of **1j** was

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Table 1 Synthesis of pyrano[4,3-*b*]pyrans in the presence of 1*H*-imidazol-3-ium tricyanomethanide

Entry	Arylaldehyde (target molecule)	Time (min.)	Melting point (°C)	Appearance	Yield (%) ^a
1	Benzaldehyde (1a)	15	235–237	White solid	85
2	4-Methylbenzaldehyde (1b)	20	210–212	White solid	80
3	4-Methoxybenzaldehyde (1c)	20	198–200	White solid	83
4	3-Methoxybenzaldehyde (1d)	30	222–225	White solid	78
5	3,4-Dimethoxybenzaldehyde (1e)	30	145–148	Yellow solid	78
6	4-Cyanobenzaldehyde (1f)	10	215–218	White solid	92
7	4-Nitrobenzaldehyde (1 g)	10	211–214	Cream solid	90
8	3-Nitrobenzaldehyde (1 h)	17	224–226	White solid	84
9	2,4-Dichlorobenzaldehyde (1i)	10	236–238	White solid	94
10	4-Chlorobenzaldehyde (1j)	15	212–214	White solid	88
11	2-Chlorobenzaldehyde (1 k)	20	268–269	White solid	82
12	4-Bromobenzaldehyde (1 l)	10	217–219	White solid	90
13	3-Bromobenzaldehyde (1 m)	25	240–242	White solid	81
14	4-Flourobenzaldehyde (1n)	25	224–227	White solid	81
15	Terephthaldehyde (1o)	25	> 300	Cream solid	80

Reaction conditions: ArCHO (1.0 mmol), malononitrile (1.0 mmol, 66 mg), 4-hydroxy-6-methyl-2*H*-pyran-2-one (1.0 mmol, 126 mg), catalyst (2 mol%), Solvent free, 70 °C

^aIsolated yields

performed in the presence of 2 mol% of 1*H*-imidazol-3-ium tricyanomethanide at 70 °C under solvent free conditions. Therefore, Table 2 in original paper was corrected with new results as follows (Table 1). Reusability test of the catalyst was not successful.

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