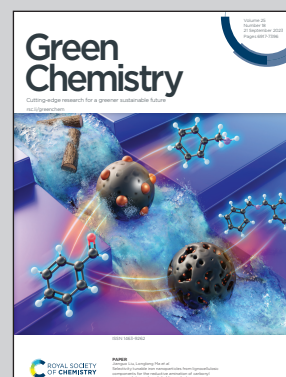


**Showcasing research from Professor Fei Cao and Professor Lili Zhao *et al.* from Nanjing Tech University, Jiangsu, China.**

Chemo-enzymatic cascades producing 2,5-furandicarboxylic acid precursors *via* D-gluconate “barbell oxidation” and dehydration

A new chemo-enzymatic strategy for generating furan-2,5-dicarboxylic acid (FDCA) precursors from sodium gluconate (GA) *via* bio-oxidation and dehydration is presented. Ga5DH was coupled with the NADPH dehydrogenase to facilitate the production of 5-keto-D-gluconic acid (5KGA) from GA. Through 5KGA dehydration, an appreciable yield of *n*Bu-FFCA was generated. Compared with the conventional strategy, our approach leads to a higher overall yield and demonstrates good sustainability and market competitiveness, thus achieving a milestone in FDCA production.

**As featured in:**



See Fei Cao, Lili Zhao, Hongli Wu *et al.*, *Green Chem.*, 2023, **25**, 7126.