SUPPLEMENTARY INFORMATION

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1. Experimental Details 1.1 Materials and characterization

The trimethyl 1,3,5-benzenetricarboxylate, pyridinium chlorochromate and lithium aluminum hydride (LiAlH₄) used to synthesize tribenzaldehyde were purchased from Tianjin Heowns Biochemical Reagent Co., Ltd.. The 1,2-diaminocyclohexane were purchased from Tianjin Xiens Biochemical Technology Co., Ltd.. Tetrahydrofuran (THF) and ethanol have been purified using standard procedures, all other reagents were commercially available, which have not been purified and directly been used.

1.2 Synthesis of 1,3,5-benzenetrimethanol

LiAlH₄ (270 mg) was added to a round-bottomed flask and mixed with tetrahydrofuran (10 mL) slowly under the conditions of stirring in ice water bath. And then the trimethyl 1,3,5benzenetricarboxylate (511 mg) and THF (20 mL) was drop-wise added into the mixture. And then, removing the ice bath and heating up to room temperature. The solution was heated to reflux for 20 h, after cooled to room temperature, slowly added H₂O (30 mL) to quench the reaction. The mixture was separated with Buchner funnel, the resulting filtrate was evaporated and dried under decompression and dried in vacuum, finally got 1,3,5-benzenetrimethanol.

1.3 Synthesis of 1,3,5-triformylbenzene

The 1,3,5-benzenetrimethanol (450 mg), CH_2Cl_2 (90 mL) and diatomite (2.25 g) were mixed in a 150 mL round-bottomed flask, respectively, and then the PCC (3.46 g) was slowly added, the mixture was put into an argon atmosphere and magnetic stirring at room temperature for 10 h. Ethyl ether (80 mL) was added into the reaction when the reaction was ended. The product was filtered to separated and the resulting filtrate was reduced pressure distillation to get rid of solvents. Finally, the mixture was purified by silica gel chromatograph. It was successfully synthetized through NMR analysis with **Fig. S1**.

1.4 Synthesis of CC3-R

The synthesis of CC3-R is according to the previous method.²⁶ The 1,3,5-triformylbenzene (0.5 g), CH₂Cl₂ (10 mL) and trifluoroacetic acid (10 µL) was added into a 50 mL single round bottom flask, respectively. The 1,2-diaminocyclohexane (0.5 g) and CH₂Cl₂ (10 mL) were added into the single round bottom flask together. At last, the mixture was stood for a week. The crystals would grow around the container. After that the mixture was separated by

centrifuge technology and washed with CH_3OH/CH_2Cl_2 mixture (v/v, 95/5) for 6 times, and dried at 70 °C under vacuum overnight.



Fig. S1 The NMR spectra of 1,3,5-triformylbenzene



Fig. S2 Microporous pore size distribution curves of CC3-R and Ru@CC3-R



Fig. S3 EDS elemental analysis of Ru@CC3-R









Fig. S6 GC-MS of the production was immediately sampled at the same time solution containing AB was injected.











Entry	Substrate	Product	Time	Conv. (%)	Sel. (%)
1			15min	27.8	>99.9
2			2h	61.3	>99.9
3			5h	83	>99.9
4			10h	97.6	>99.9
5	0 ₂ N	H ₂ N	10h	>99.9	>99.9
6	NH ₂	NH ₂	10h	0	0
7	NH2	NH ₂	10h	0	0
8			10h	80.5	>99.9
9			10h	80	62.9
10 ^b			24h	0	0

Table S1 Hydrogenation of different quinolines over the catalyst of Ru(1.45%)@CC3-R^a



Reaction conditions: ^a 0.2 mmol quinolines, 10 mg Ru(1.45%)@CC3-R, 2 mL water as solvent, room temperature; ^bOther conditions remain unchanged without catalyst.