Electronic Supplementary Material (ESI) for Catalysis Science & Technology.

SUPPORTING INFORMATION

One-pot Synthesis of (*R*)-2-Acetoxy-1-indanone from 1,2-Indanedione Combining Metal Catalyzed Hydrogenation and Chemoenzymatic Dynamic Kinetic Resolution

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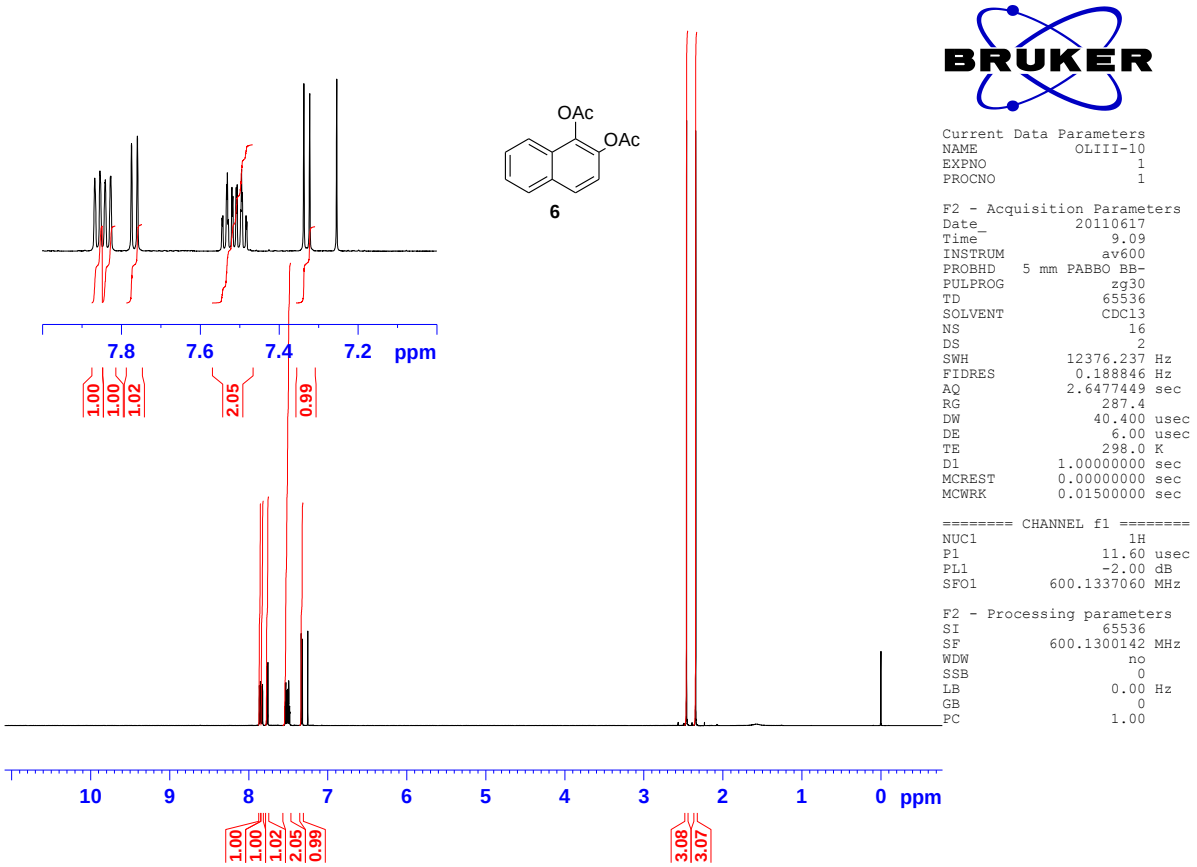

Figure S1. ^{1}H-NMR (600.13 MHz) spectrum of 1,2-diacetoxynaphthalene using TMS as reference and $CDCl_3$ as solvent.

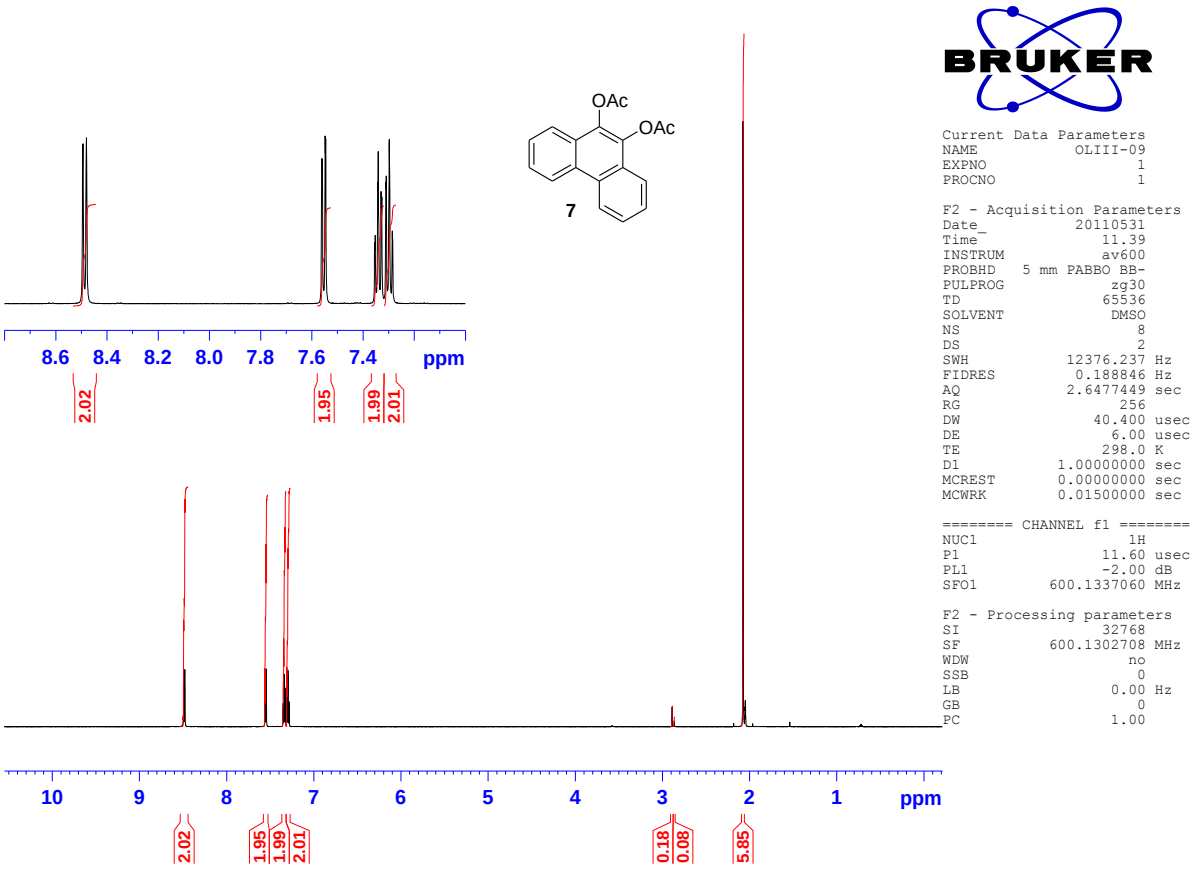

Figure S2. ^{1}H-NMR (600.13 MHz) spectrum of 9,10-diacetoxyphenanthrene in deuterated DMSO using the DMSO solvent residue as reference.

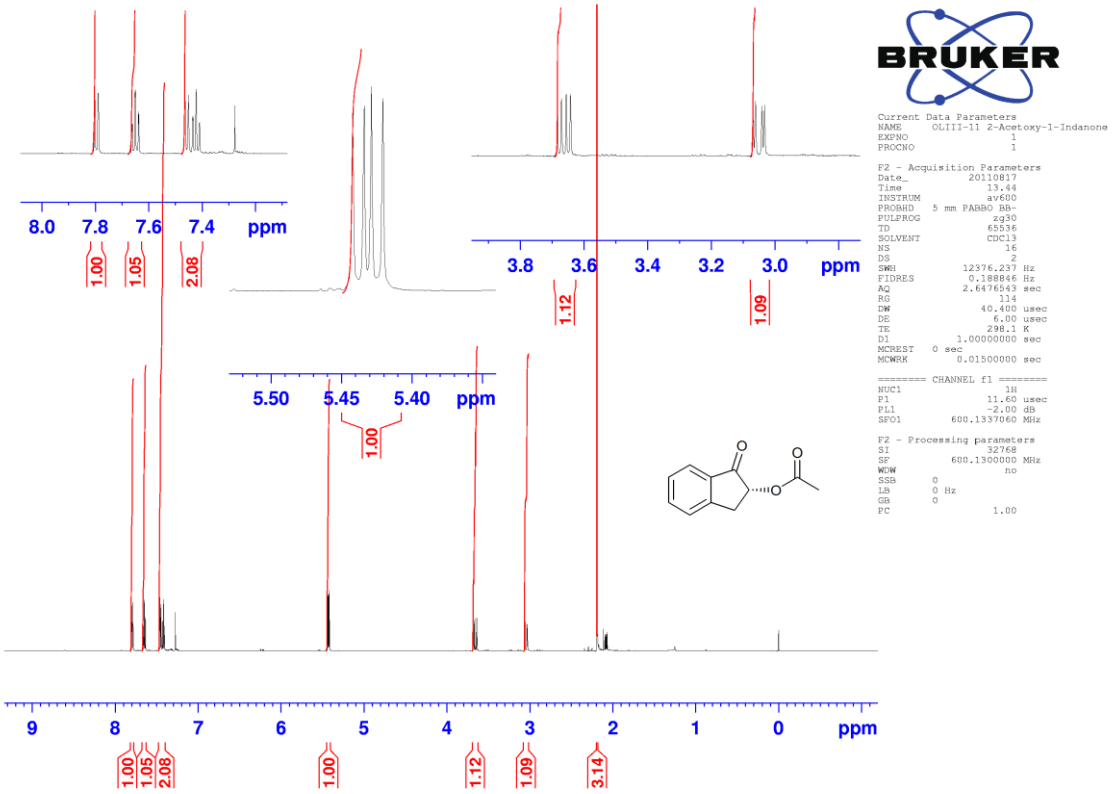

Figure S2. ^{1}H-NMR spectrum (600.13 MHz) of (*R*)-2-acetoxy-1-indanone in $CDCl_3$ using TMS as reference.

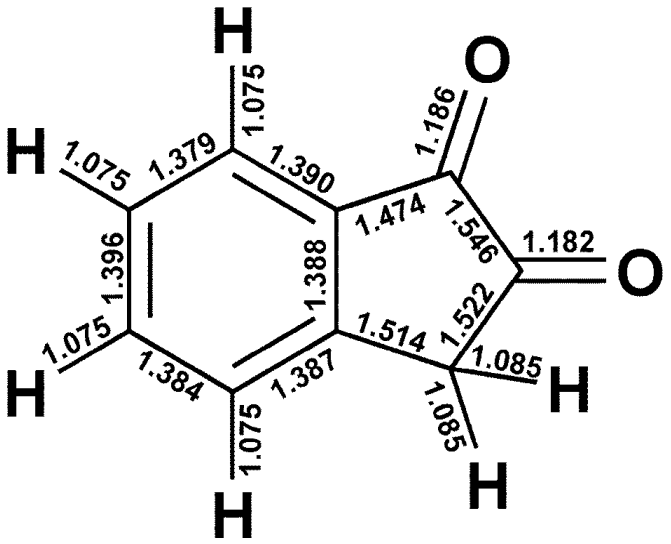

Figure S3. The interatomic distances for the 1,2-indanedione structure obtained from the quantum mechanical calculations (for details, see experimental section).

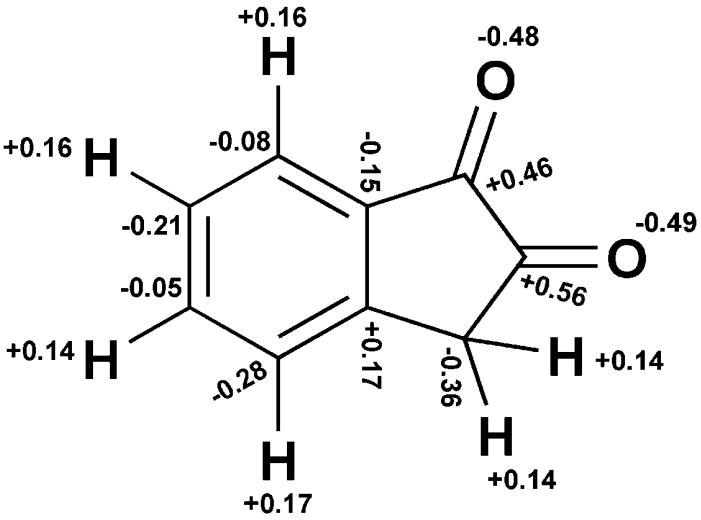

Figure S4. Atomic charges for the 1,2-indanedione structure calculated using the Hartree-Fock theory (for details, see experimental section).

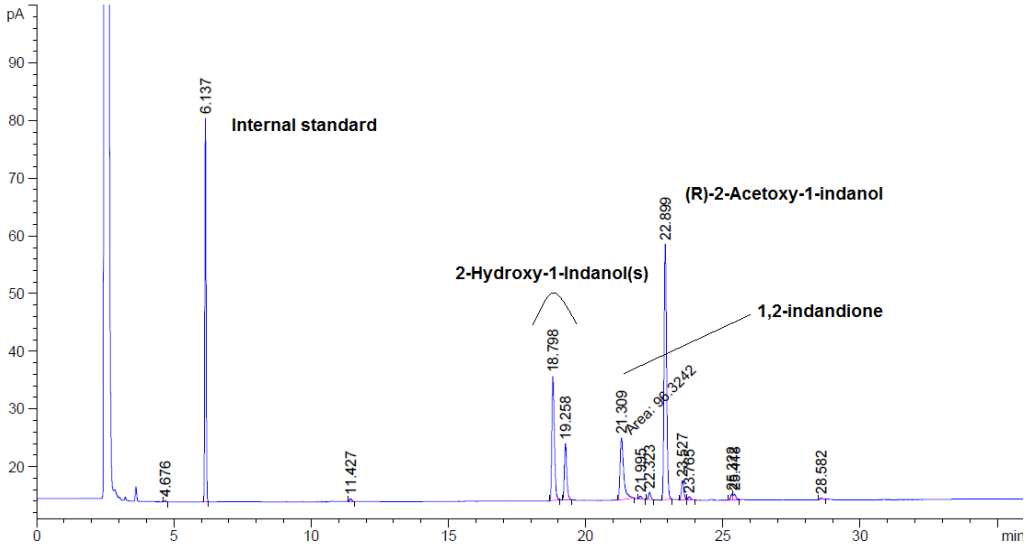

Figure S5. Chiral GC chromatogram of crude reaction mixture of the one-pot reaction sequence starting from 1,2-indanedione (175 mg, 1.2 mmol) with dodecane as an internal standard (68 µL, 0.3 mmol) in ethyl acetate (**EA**), 60 mL in H_2 atmosphere using Pd/Al_2O_3 (51.2 mg, 2 mol-%), lipase (125 mg) and $Ru(OH)_3/Al_2O_3$ (85 mg, 1.5 mol-%) as catalysts and trifluoroethyl acetate (545 µL, 4.8 mmol, 4 equivalents) as acyldonor at 40 °C.

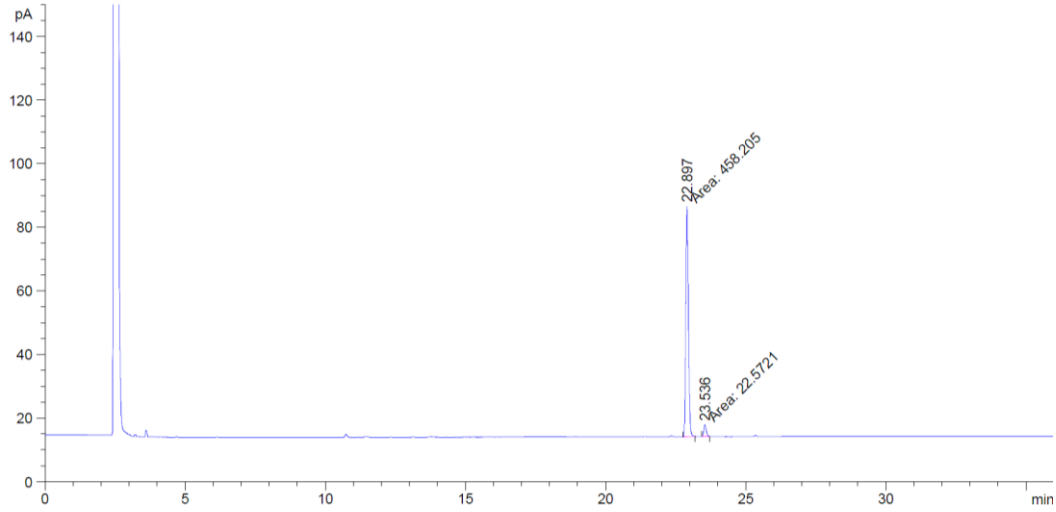

Figure S6. Chiral GC chromatogram of (*R*)-2-acetoxy-1-indanone after isolation by column chromatography from a one-pot reaction mixture (*ee* = 91 %).

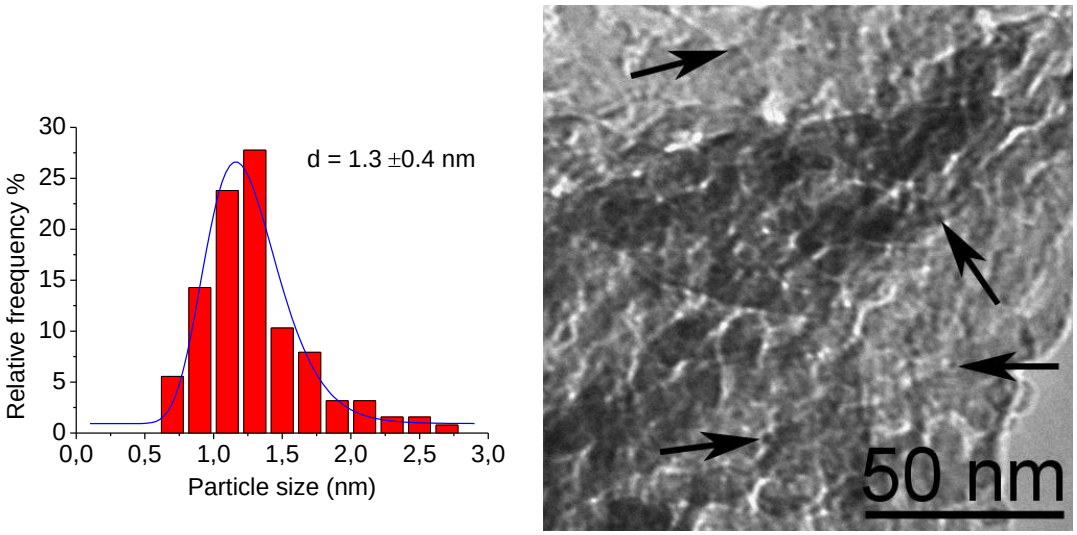

Figure S7. Ru particle size distribution and image from HR-TEM analysis of $Ru(OH)_3/Al_2O_3$.

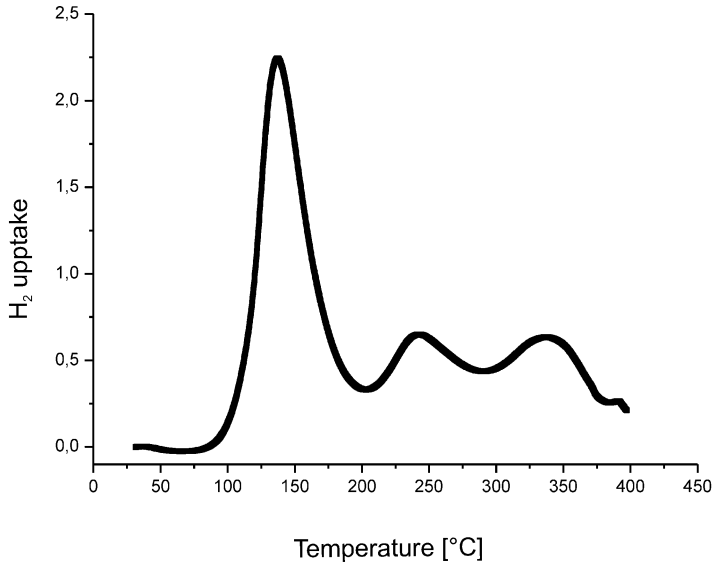

Figure S8. Temperature programmed reduction (TPR) of $Ru(OH)_3/Al_2O_3$.

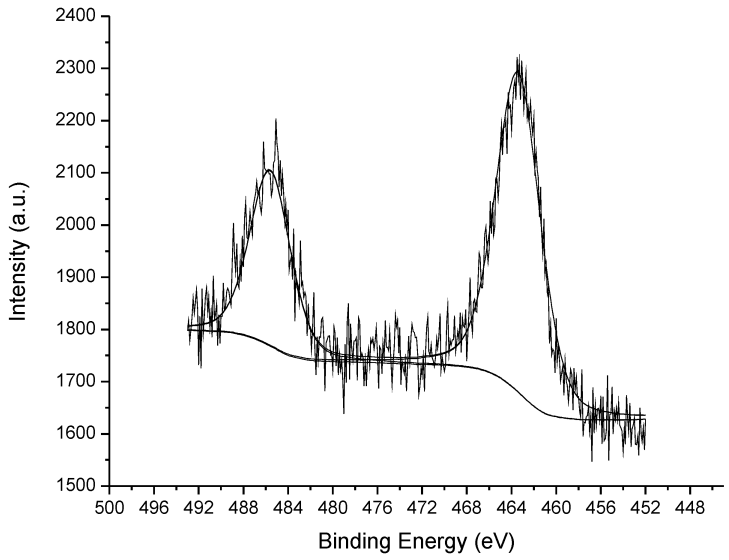

Figure S9. XPS spectrum of $Ru(OH)_3/Al_2O_3$ in the Ru 3p region.