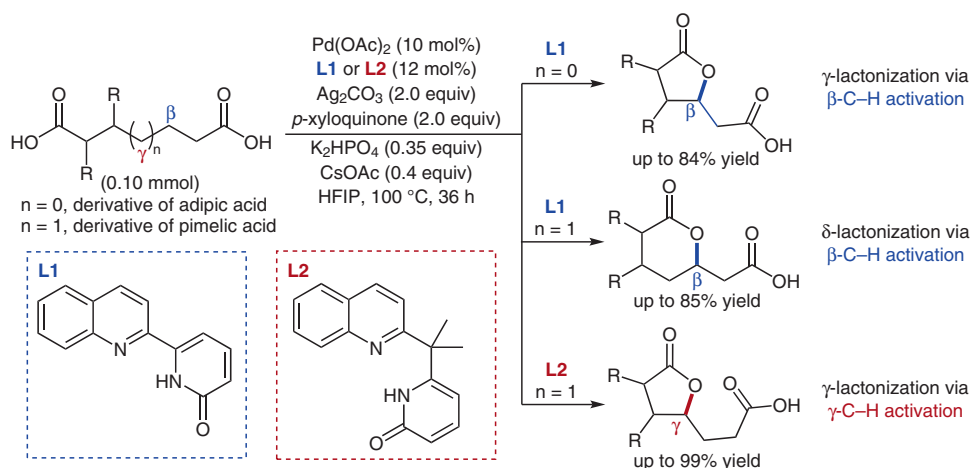
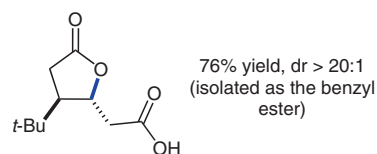
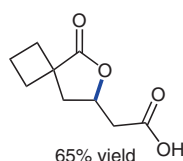
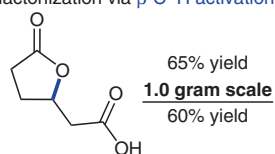


Switchable Selectivity in Pd-Catalyzed Lactonization via Ligand-Controlled Regioselective C–H Activation

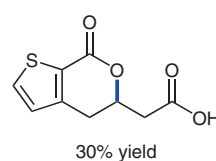
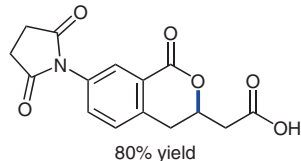
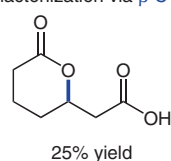


Selected examples:

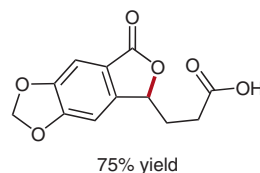
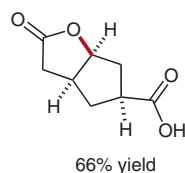
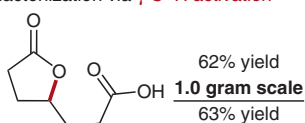
γ-lactonization via β-C–H activation



δ-lactonization via β-C–H activation



γ-lactonization via γ-C–H activation



Significance: The group of Yu reports a regioselective method for achieving intramolecular lactonization via palladium-catalyzed C–H activation. Notably, the selectivity can be tuned with the ligand. β-C–H activation is obtained with ligand L1, while γ-C–H activation is favoured with ligand L2.

Comment: Both γ- and δ-lactones can be formed using ligand L1, starting from derivatives of adipic or pimelic acid, respectively. The authors demonstrated the utility of their reaction by applying it to the total synthesis of myrotheciumone A and pedicellosine.