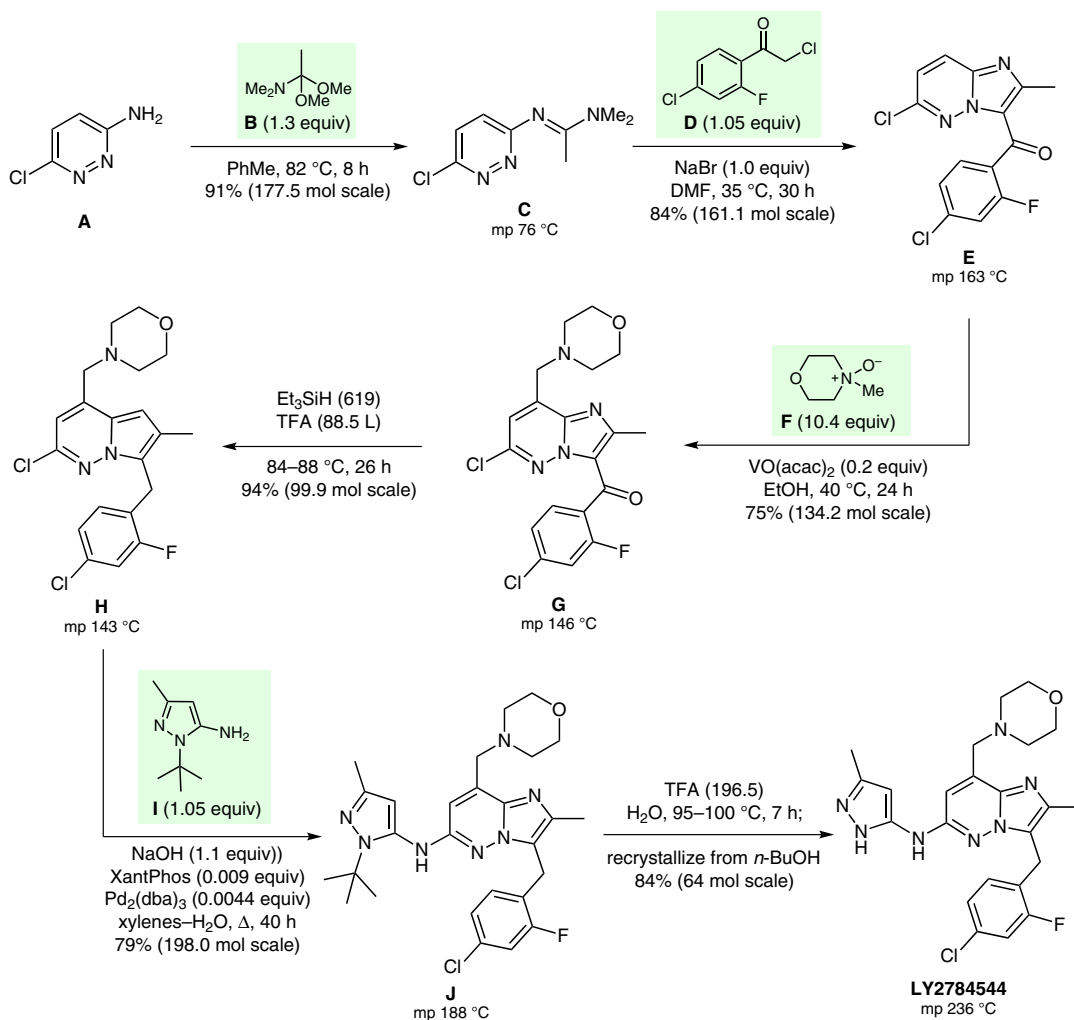


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 Development and a Practical Synthesis of the JAK2 Inhibitor LY2784544
Org. Process Res. Dev. **2012**, *16*, 70–81.

Synthesis of LY2784544



Significance: LY2784544 is a Janus kinase 2 (JAK2) inhibitor that is under development for the treatment of myeloproliferative neoplasms. The synthesis depicted delivered >100 kg of the target molecule and features a new aminomethylation reaction (**E** → **G**) involving *N*-methylmorpholine *N*-oxide and vanadium catalysis.

Comment: The authors speculate that the aminomethylation reaction of **E** involves a primary radical derived from *N*-methylmorpholine. An alternative ionic mechanism based on an iminium salt is unlikely since *N*-methylenmorpholinium chloride reacts preferentially at the methyl group in **E** (Mannich-type reaction).

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