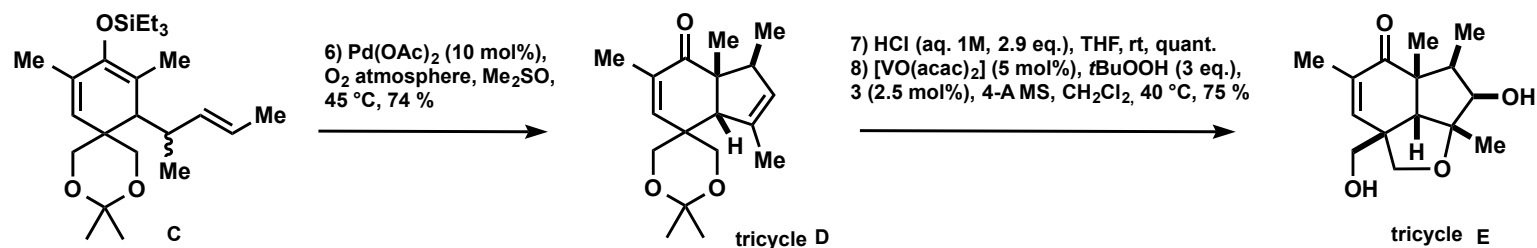
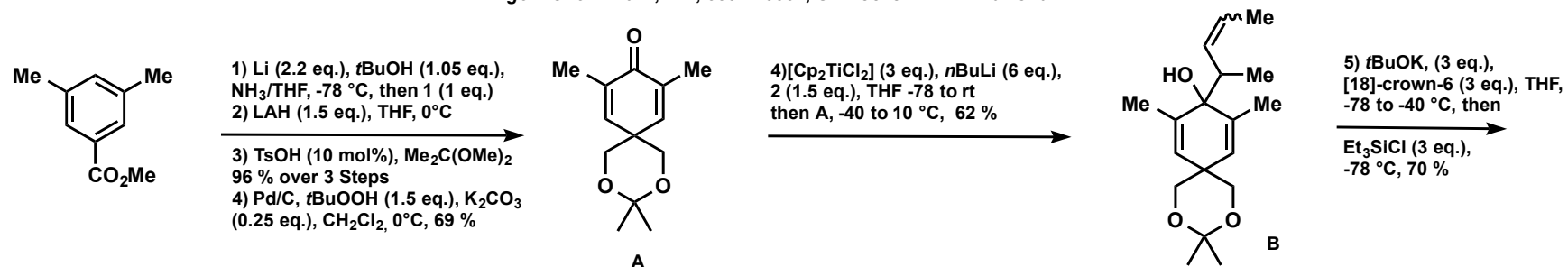


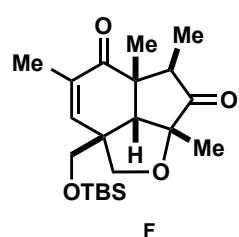
Totalsynthese und stereochemische Strukturbereinigung von Indoxamycin B,

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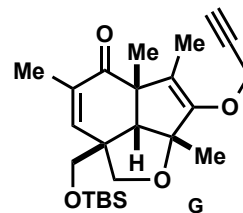
9) TBSCl (1.2 eq.), NEt₃ (2 eq.), DMAP (0.2 eq.), CH₂Cl₂, 0 °C to rt, 88%
 10) DMP (1.5 eq.), CH₂Cl₂, 0 °C to rt, 95 %

Monoprotection

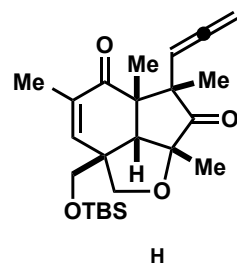


11) KH (1.1 eq.), THF, RT, then [18]-crown-6 (1.5 eq.), 4 (1.2 eq), 0 °C, 87 %

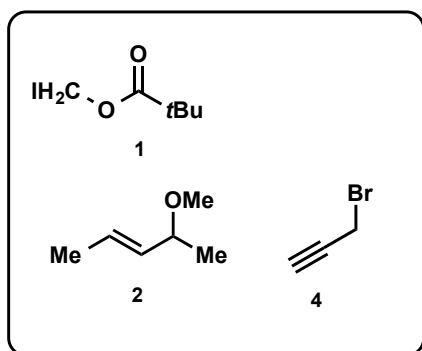
12) [(Ph₃PAu)₃O]BF₄ (1 mol%), 1,2 dichlorethane, 75 °C, 84 %



Monoreduction



13) LiBHET₃ (1.1 eq.), THF, -78 °C, 80 %
 14) Chlor[2-(di-tert-butyl-phosphanyl) biphenyl]gold (I) (10 mol%), AgOTs (10 mol%), PhMe, 60 °C, 72 %

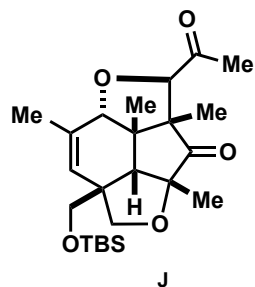


Totalsynthese und stereochemische Strukturbereinigung von Indoxamycin B,

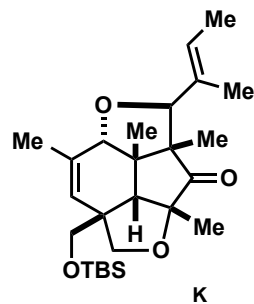
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14) $[\text{Mn}(\text{dpm})_3]$ (10 mol%),
 PhSiH_3 (2.5 eq.),
 O_2 -Atmo., EtOH, 73%

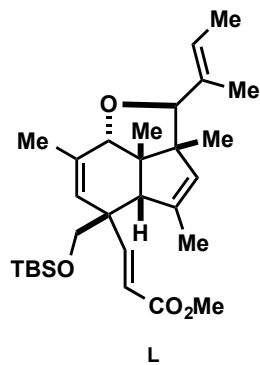
15) DMP (1.5 eq.), CH_2Cl_2 ,
 0°C to rt, 72 %



16) Ph_3PEtBr (6 eq.),
 $\text{KN}(\text{SiMe}_3)_2$ (5 eq.),
THF/HMPA (10:1) rt,
 -78°C , then -30°C , 80 %



17) SmI_2 (1 eq.), THF/MeOH (7:3), rt, 99%,
18) DMP (1.25 eq.), CH_2Cl_2 , 0°C to rt. quant.
19) Mehtyldiethylphosphonoacetat (5 eq.),
NaH (5 eq.), THF, rt, 99 %
20) $\text{BH}_3^*\text{tBuNH}_2$ (2 eq.), CH_2Cl_2 , 40°C , 79%
21) Burgess reagent (2 eq.), PhMe, 110°C , 69 %



22) LiOH (10 eq.), then HCl (1M, 29 eq.),
THF/MeOH/ H_2O rt, 96 %

