

## Supplementary Material

### An efficient and scalable synthesis of thiazolo ring fused 2-pyridones using flow chemistry

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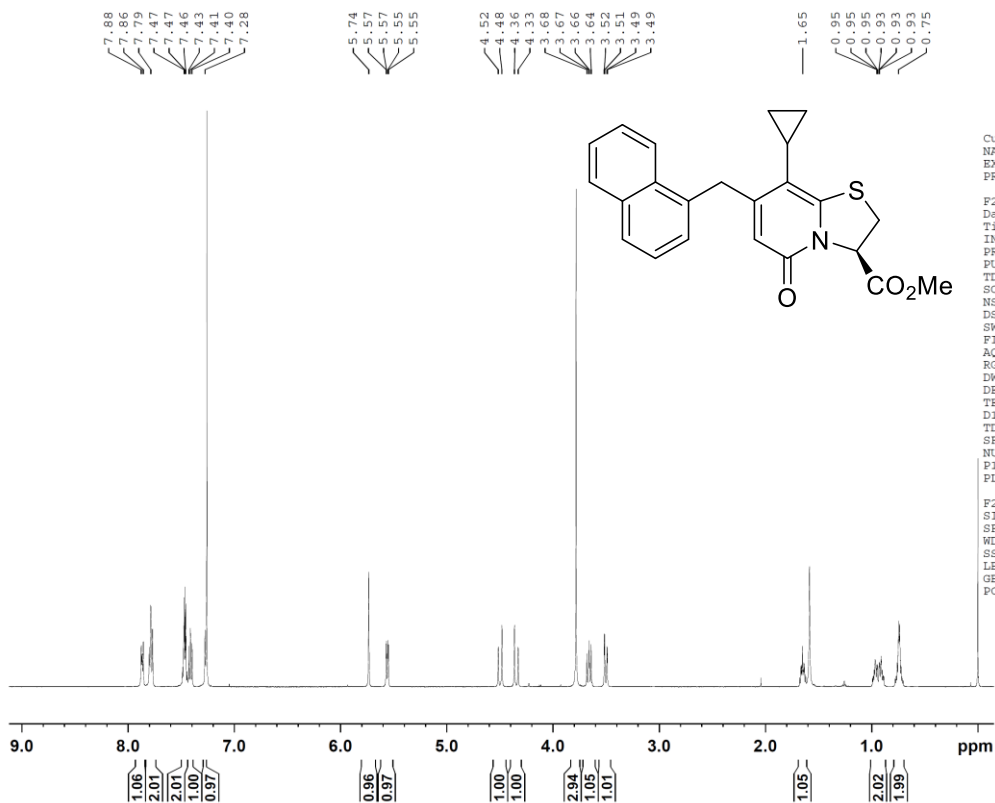
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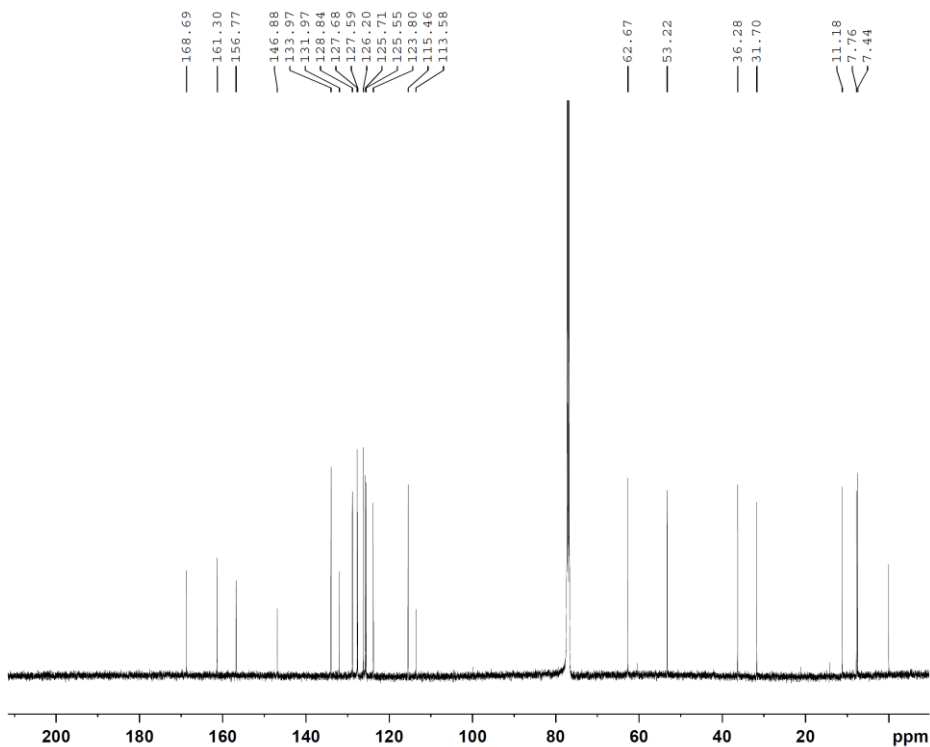
## C10 from flow synthesis:

<sup>1</sup>H NMR:

Current Data Parameters  
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 PROCNO 1

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 Date\_ 20201021  
 Time\_ 12.45 h  
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 DS 2  
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 RG 8.75  
 DW 50.000 usec  
 DE 10.00 usec  
 TE 298.0 K  
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 TDO 1  
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 P1 12.00 usec  
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F2 - Processing parameters  
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 LB 0.30 Hz  
 GB 0  
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<sup>13</sup>C NMR:

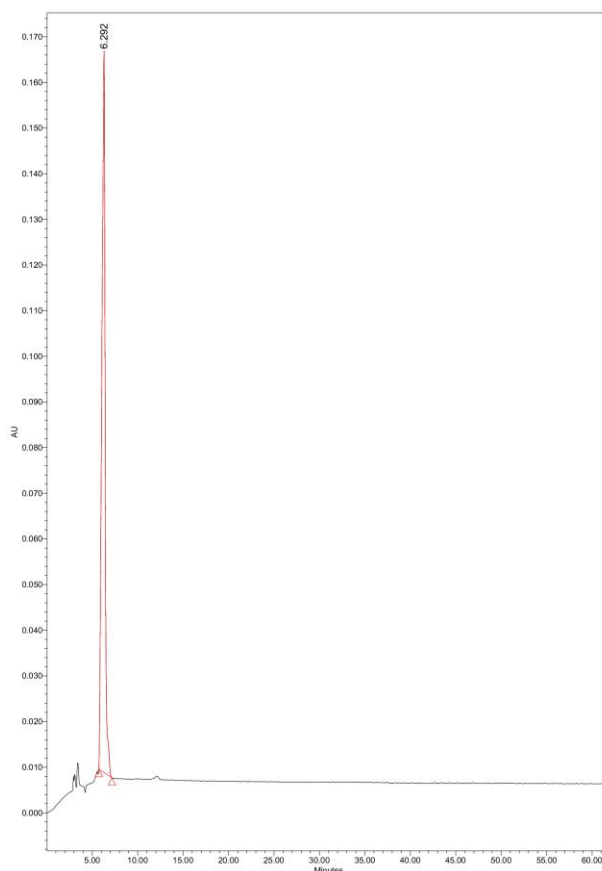
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 FIDRES 0.908261 Hz  
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 RG 168.06  
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 DE 18.00 usec  
 TE 298.0 K  
 D1 2.00000000 sec  
 D11 0.03000000 sec  
 TDO 1  
 SFO1 125.7703643 MHz  
 NUC1 13C  
 P1 10.00 usec  
 PLW1 54.32600021 W  
 SFO2 500.1320005 MHz  
 NUC2 1H  
 CPDPRG2 waltz16  
 PCPD2 80.00 usec  
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 PLW13 0.08678737 W

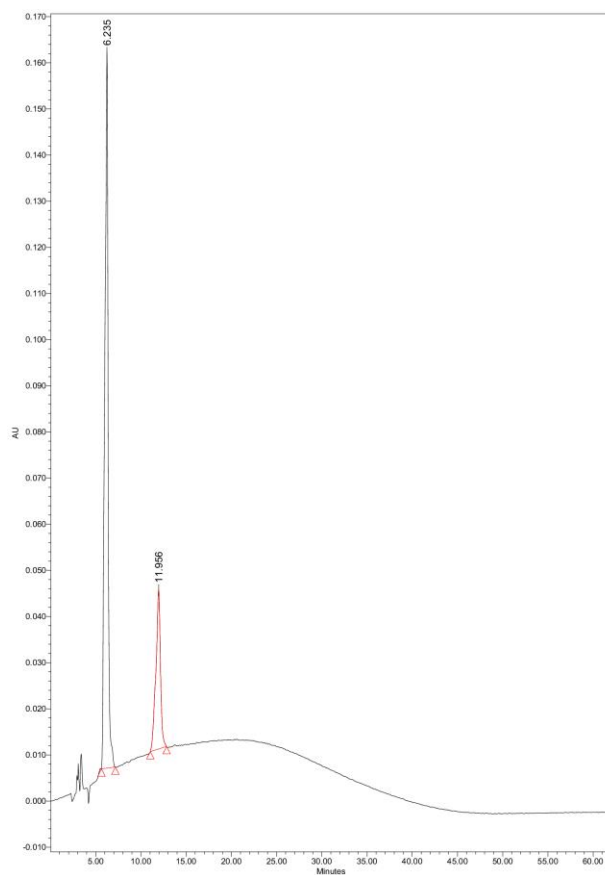
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 PC 1.40

**Chiral HPLC traces:**

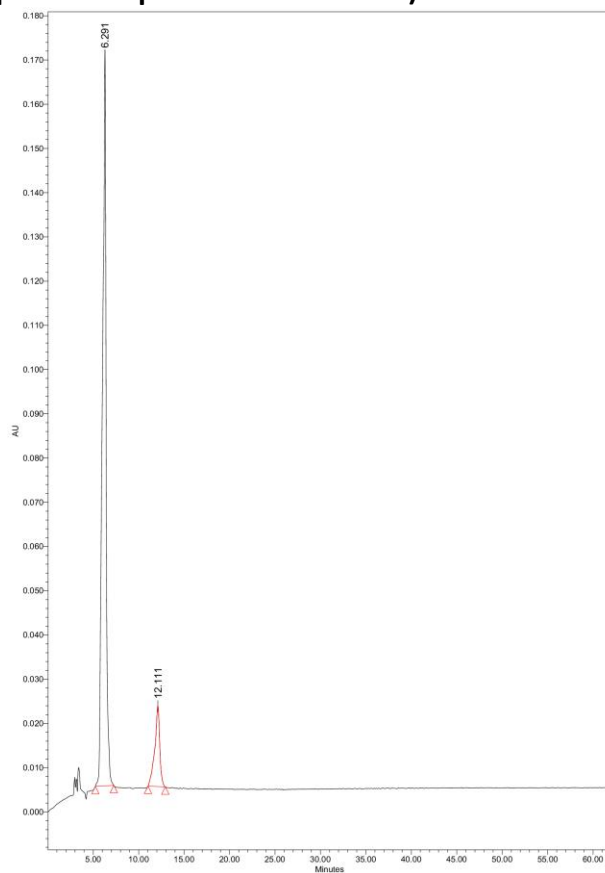
Chiral HPLC of cyclopropyl thiazoline **11** was carried out using a Diacel Chiracel OD-H (250 x 4.6 mm) column and eluting isocratically (Hexane:<sup>i</sup>PrOH 90:10) at ambient temperature, then detected by UV at 254 nm. Injection was 10  $\mu$ L at 1 mg/mL in  $\text{CHCl}_3$ . Chiral HPLC of pyridone **13** was carried out using a Lux 5  $\mu$ m i-amylose-1 (250 x 4.6 mm) column and eluting on a gradient (<sup>i</sup>PrOH 30:70 to 100% hexane) at ambient temperature, then detected by UV at 254 nm. Injection was 10  $\mu$ L at 1 mg/mL in MeOH.

**Thiazoline (pure):**

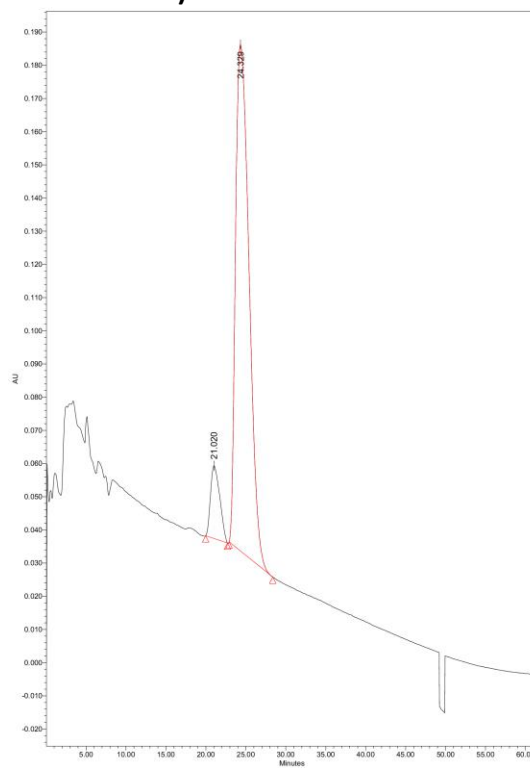
**Supporting Figure 1.** Chiral HPLC trace of thiazoline **12**, as used for MWI and flow syntheses. *ee* of the mixture = 100%,  $[\alpha]_{\text{D}} +83^{\circ}$  (c 0.5,  $\text{CHCl}_3$ )

**Thiazoline (epimerized):**

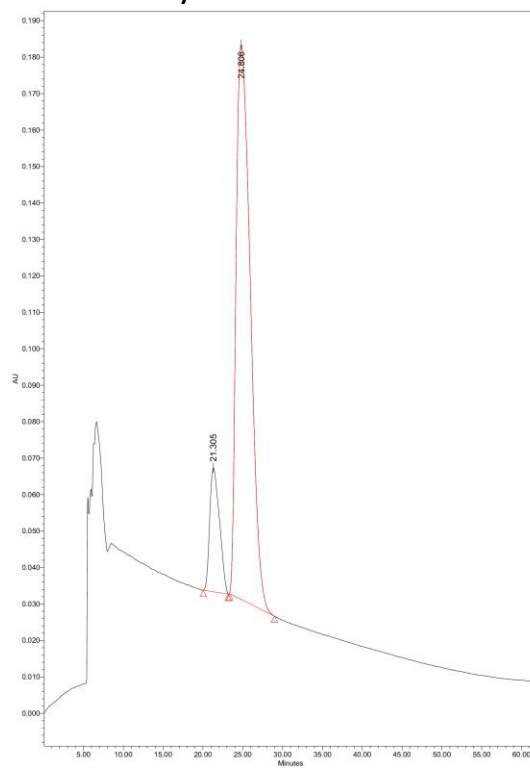
**Supporting Figure 2.** Thiazoline **12** post-epimerization, demonstrating that *R* and *S* forms can be distinguished. *ee* of the mixture = 52%,  $[\alpha]_D +44^\circ$  (c 0.5,  $\text{CHCl}_3$ ).

**Thiazoline (mixture of enantiopure and epimerized thiazoline):**

**Supporting Figure 3.** Mixture of pure and epimerised thiazoline **12** confirms the identity of the peaks. *ee* of the mixture = 74% (c 0.5, CHCl<sub>3</sub>).

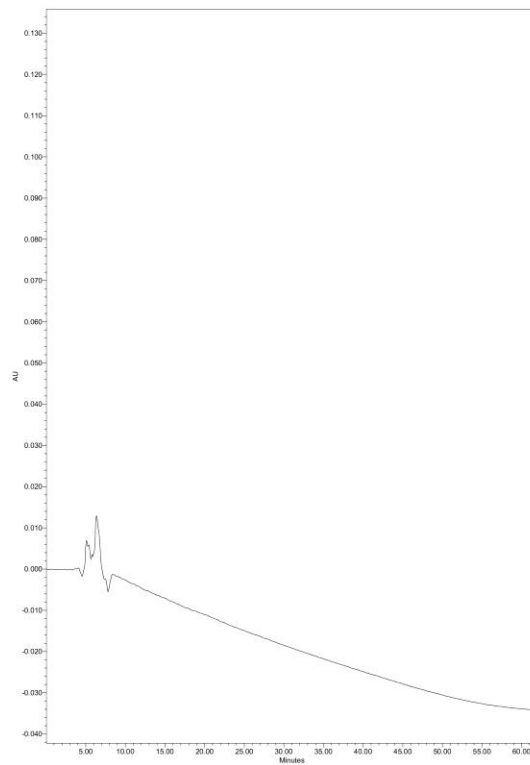
**2-Pyridone 13 (Prepared using MWI conditions):**

**Supporting Figure 4.** Enantiopurity of pyridone **13**, as synthesised by MWI. *ee* of the mixture = 82%,  $[\alpha]_D -188^\circ$  (c 0.5,  $\text{CHCl}_3$ ).

**2-Pyridone 13 (Prepared under flow conditions):**

**Supporting Figure 5.** Enantiopurity of pyridone **13**, as synthesised by flow. *ee* of the mixture = 73%,  $[\alpha]_D -146^\circ$  (c 0.5, CHCl<sub>3</sub>).

**MeOH blank injection (baseline control)**



**Supporting Figure 6.** Blank Injection of MeOH to account for the HPLC baseline.