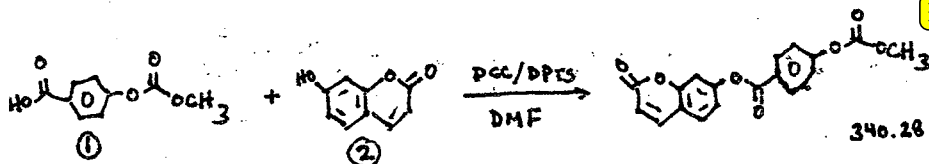


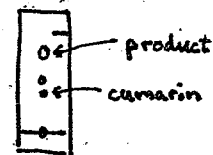
Work continued from Page



	①	②	DCC	DPTS	DMF
mw	196.16	162.145	206.33	312.5	—
mass	0.84 g	0.69	1.32	2.00	—
mmol	4.28	4.28	6.42	6.42	—
vol	—	—	—	—	~30 mL
eq.	1	1	1.5	1.5	—

3/24 oven-dried 2-neck 100-ml RB and stirbar charged w/ ①, ②, DCC, and DPTS  
DMF added to dissolve  
mixture stirred under Ar overnight @ RT

3/25 next morning TLC in 15% EtOAc/DCM shows nearly no starting material  
rxn quenched w/ 200 ml DI water  
off-white ppt. forms  
ppt. filtered and left to dry on bench



3/31 off-white solid dissolved in DCM and preadsorbed onto silica  
loaded onto column (15" x 12") and eluted w/ 10% EtOAc/DCM  
white solid collected and placed under high vac to remove remaining solvent  
NMR in DMSO shows product w/ trace impurities, impurities may be magnified due to  
slight insolubility of compound in DMSO file => DLII-202 (name will need changing later)  
0.90 g collected => 61.6% yield

4/1 material preadsorbed and run through a silica plug eluted w/ 5% EtOAc/DCM to 10% EtOAc/DCM  
white powder collected  
NMR in DMSO => DLII-02 (090208) => pure

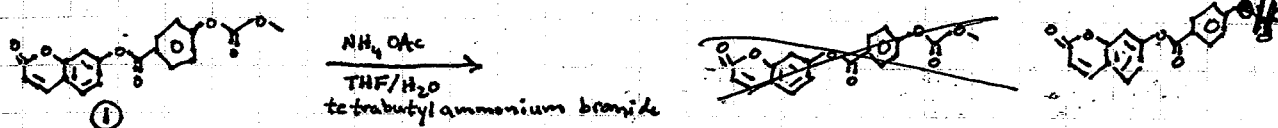
*David Z*

*David Z*

7/22/09

3/24/08

Work continued from Page



	①	NH <sub>4</sub> OAc	tetrabutylammonium bromide	THF/H <sub>2</sub> O → 3:1 ratio
mw	340.28	77.08	322.38	—
mass	~.80g 2.35	1.45	.30	—
mmol	~.00	18.8	0.076 .94	—
vol	—	—	—	80 ml → 60 ml THF, 20 ml H <sub>2</sub> O
Eq.	1	8	10 .40	—

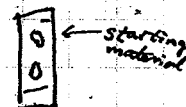
General Procedure from S5B-1061:

stir ① in THF/H<sub>2</sub>O mixture w/ NH<sub>4</sub>OAc  
 add TBABr to distribute layers  
 Extraction performed w/ EtOAc

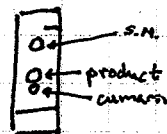
4/2 500-ml 1-neck RB charged w/ ① and dissolved w/ THF/H<sub>2</sub>O soln.  
 mixture stirred as NH<sub>4</sub>OAc and TBABr added

Rxn stirred @ RT overnight  
 mixture settles into two layers when stirring stopped  
 soln is milky white in color

TLC after 3 hrs shows possible product formation (eluted in 5% EtOAc/DCM)



4/3 The the next morning shows two spots w/ equal intensity  
 previous procedures in S5B S5B perform a work up at this time, however  
 rxn will be allowed to proceed to see if the reaction progresses any further  
 TLC shows coumarin starting to form, can be seen under both long and short wave



rxn mixture extracted w/ 4x 50 ml EtOAc  
 some compound still ppt. in aqueous layer, extracted 3x 50 ml DCM  
 organic layers washed 3x 50 ml DI H<sub>2</sub>O and dried over = combined  
 organic layers dried over Na<sub>2</sub>SO<sub>4</sub> and condensed

4/4 material preadsorbed onto silica and eluted on silica column w/ 6% EtOAc/DCM to 8% EtOAc/DCM  
 starting material, pure product, and product w/ coumarin fractions collected

Work continued to Page

SIGNATURE

DATE  
4/2/08

DISCLOSED TO AND UNDERSTOOD BY

DATE  
7/24/09

WITNESS

DATE