



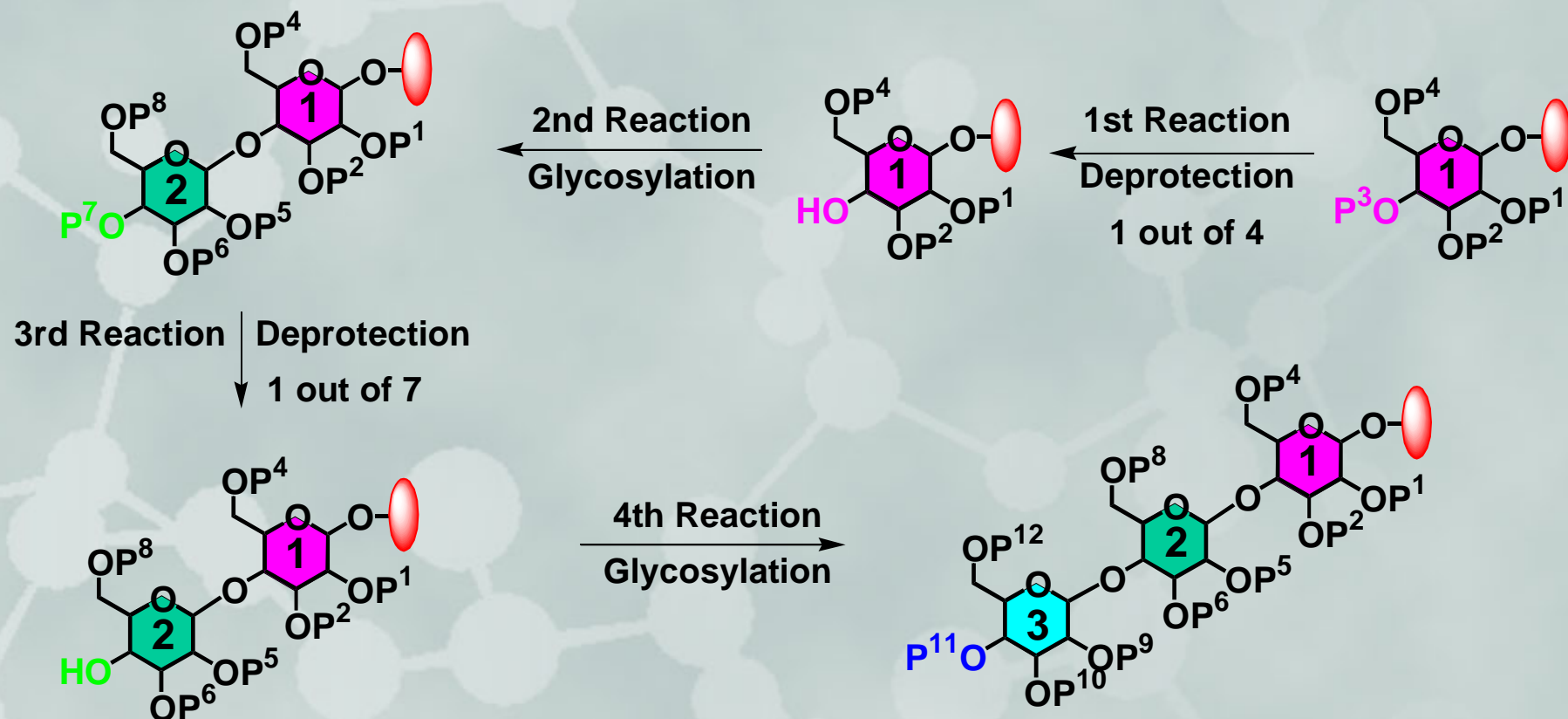
OPopS™

Optimer One-Pot Synthesis

- **For Oligosaccharide Diversity**
- ✓ • **For Sugar-Based Medicinal Chemistry**

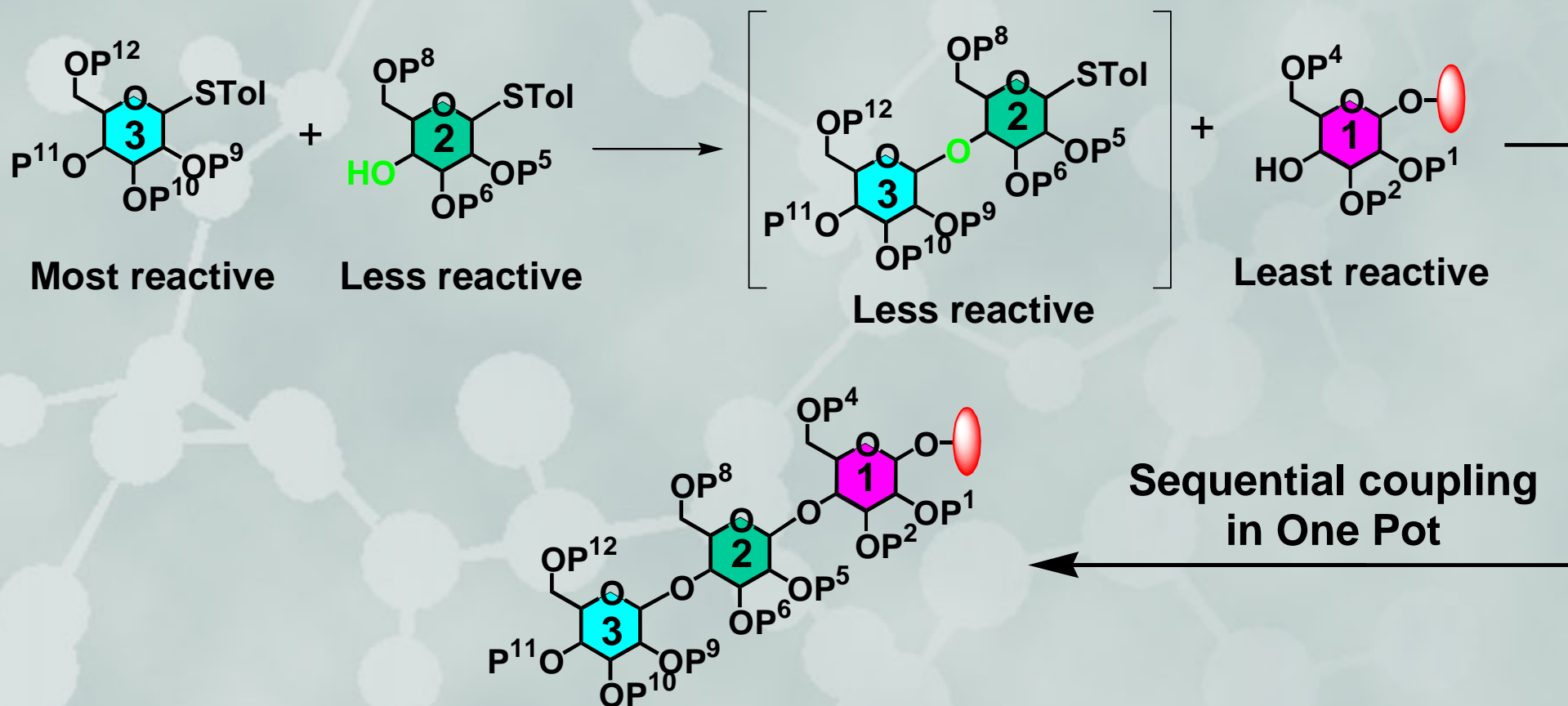
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Traditional Synthesis of a Polysaccharide



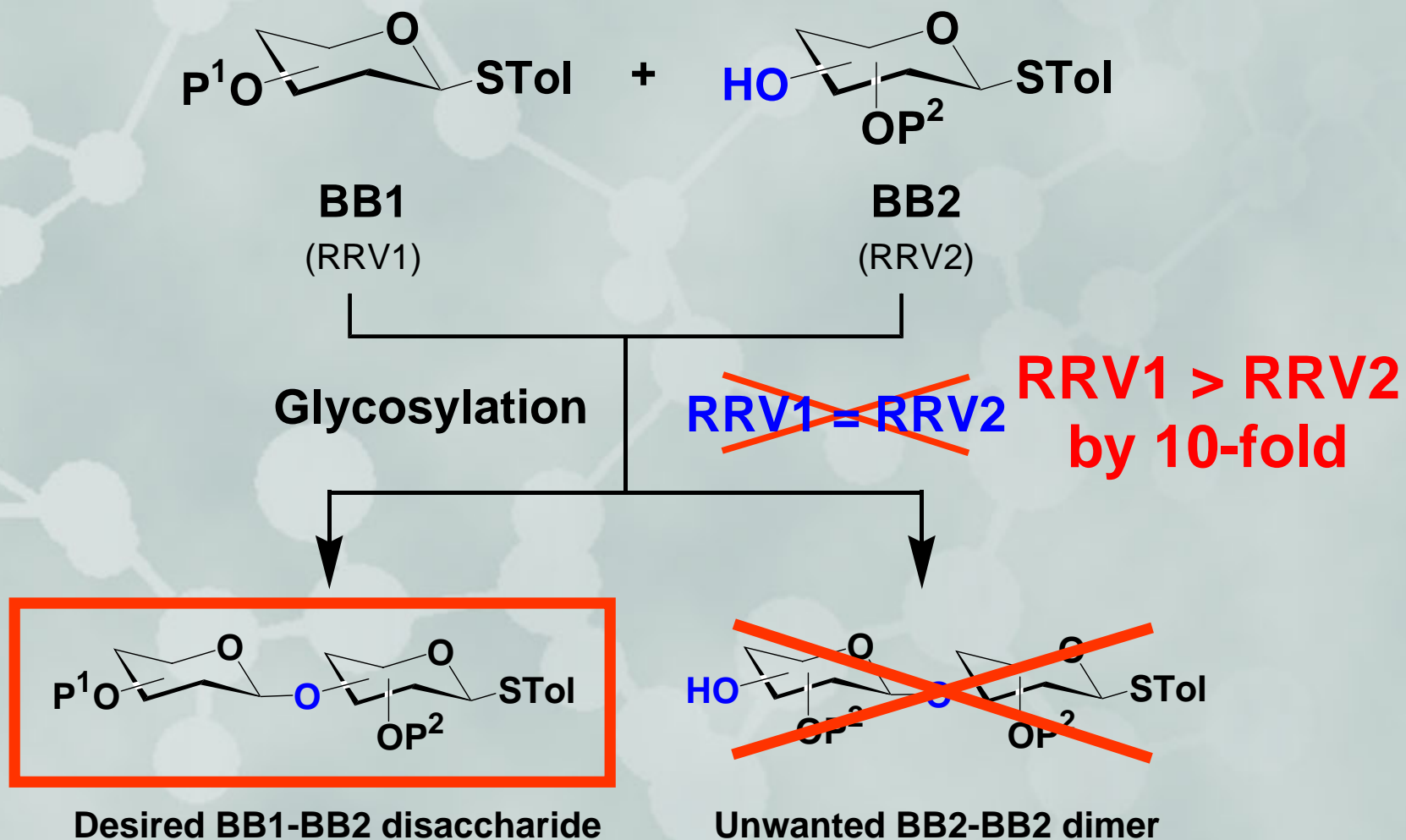
- Needs selective protective group manipulation
- Assembled in months
- Very difficult task for most chemists

OPopS™ Makes Oligosaccharide in One-Pot



- No need for protective group manipulation
- Assembled in hours

Concept of OPopS™ Technology

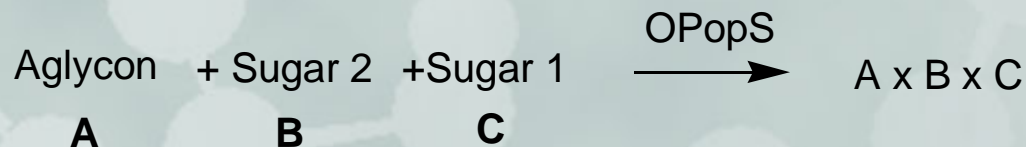
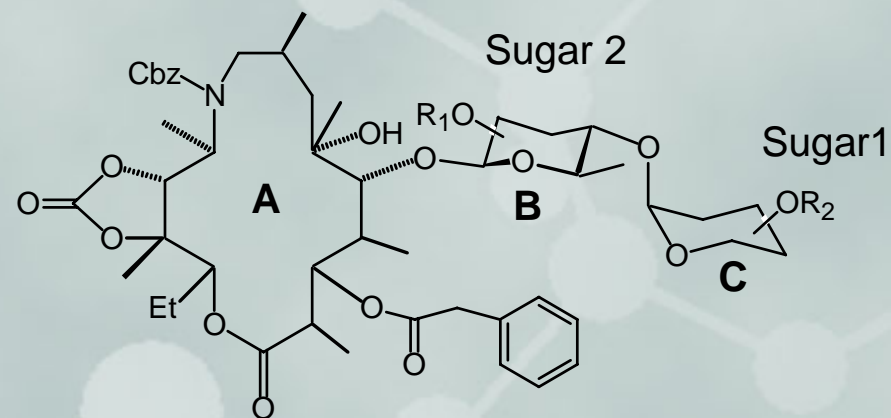


RRV can be manipulated by the choice of the protective groups (P¹, P²).

OPopS™ for Macrolide Program

Macrolide Library by OPopS™

Case Study



Sugar 1: neutral sugars and deoxysugars-*most reactive*

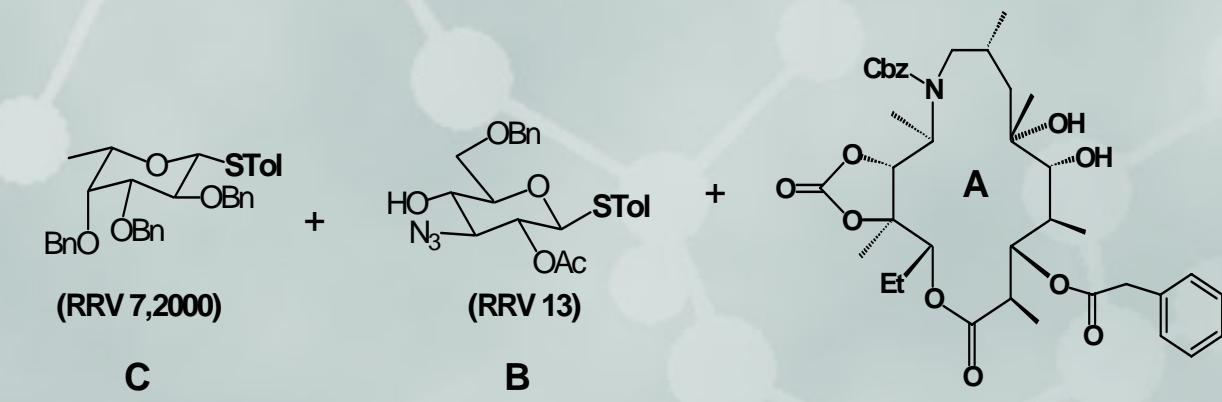
Sugar 2: 1,2-hydroxy amine containing sugars-*less reactive*

Aglycon: *least reactive*

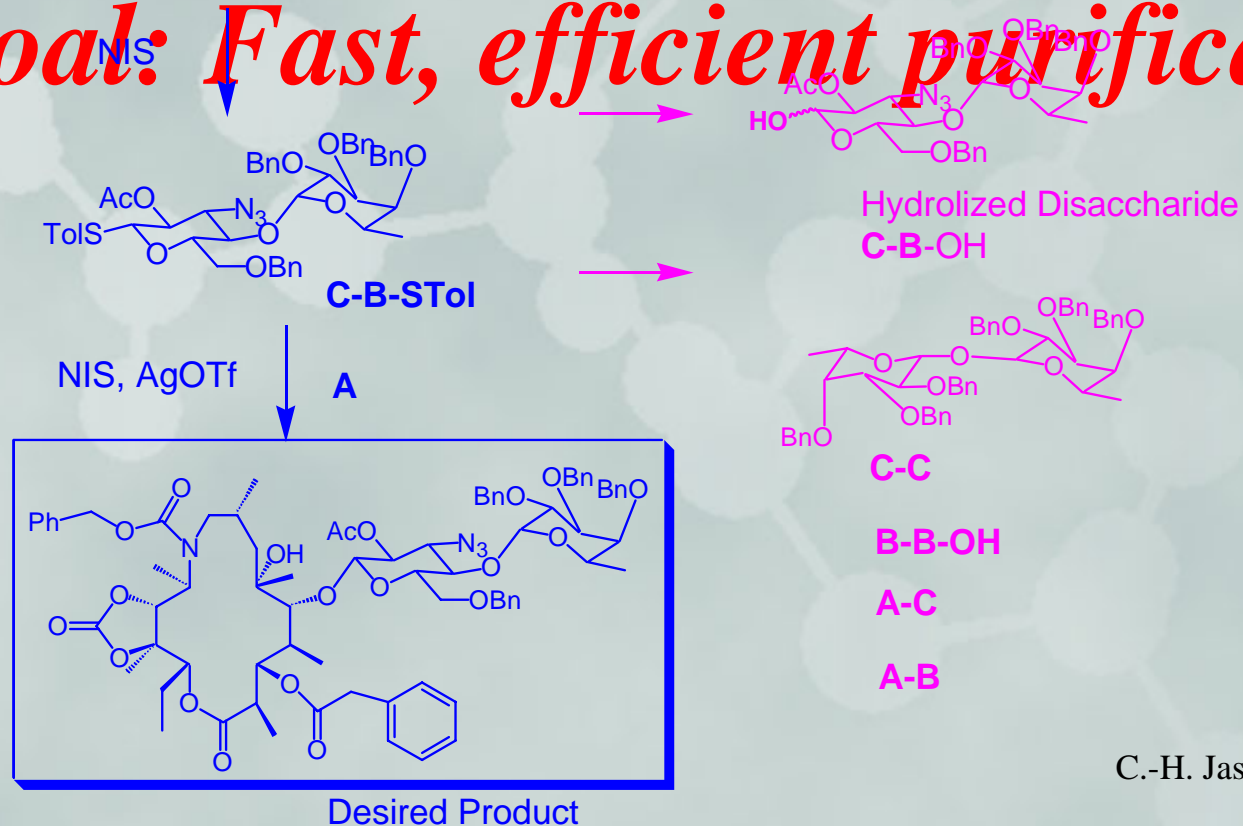
Challenging Flash Chromatography Purification Situation:
Complex components presented in one pot

Macrolide Library by OPopS™

Example



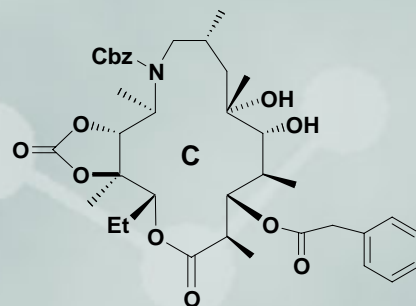
Goal: Fast, efficient purification



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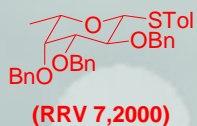
Macrolide Library by OPopS™

A 1x6x6 Library

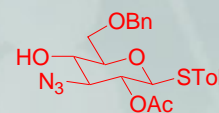
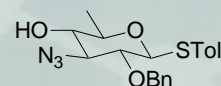
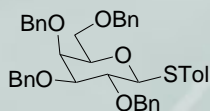


Sugar 1 (terminal sugars)

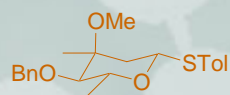
Sugar 2 (Central sugars)



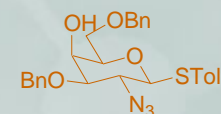
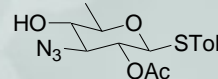
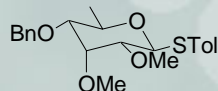
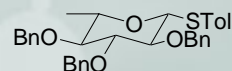
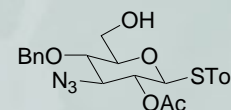
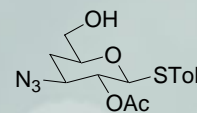
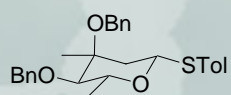
(RRV 7,200)



(RRV 13)



(RRV 1,600,000)



(RRV 778)

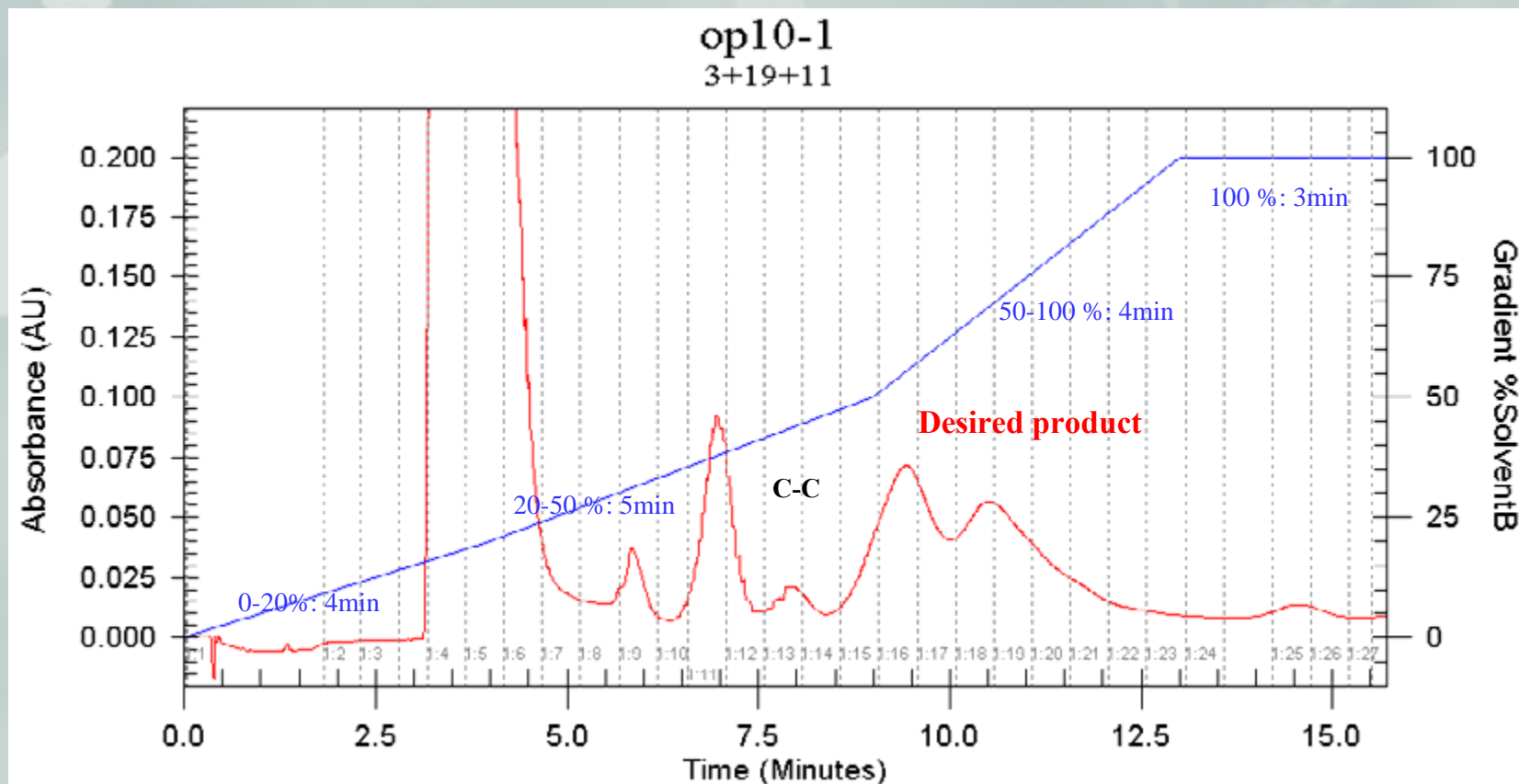
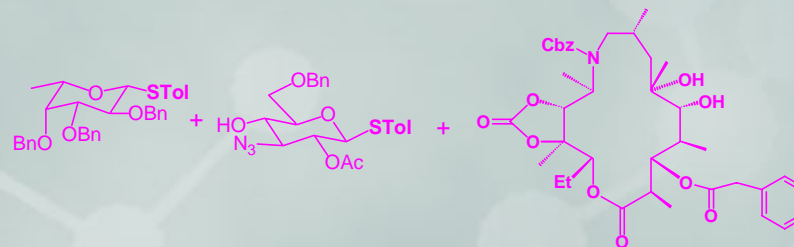
Building Blocks Polarity: Not Similar

Sequential Station Preferred e.g. ISCO Sq16x

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Macrolide Library by OPopS™

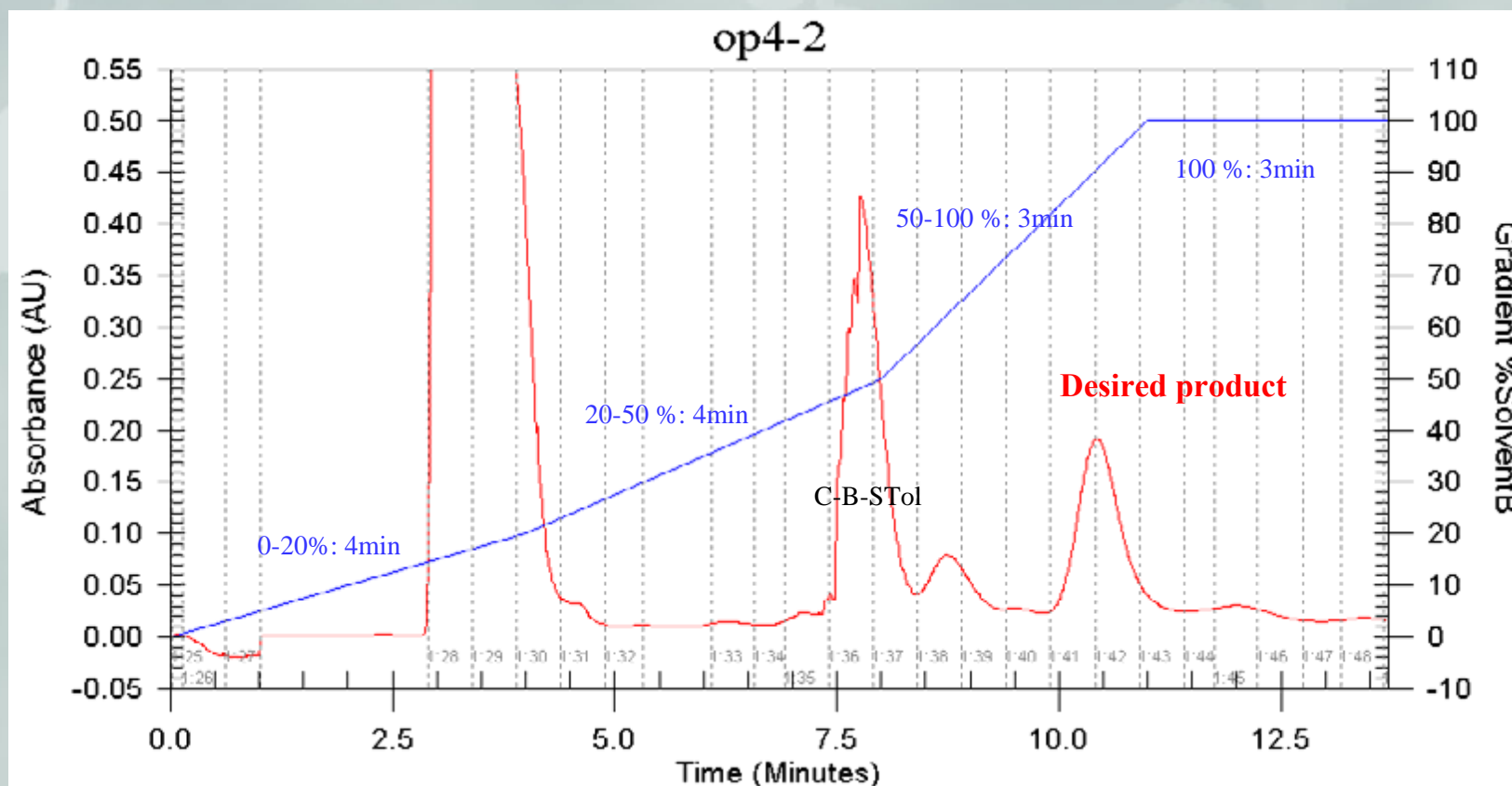
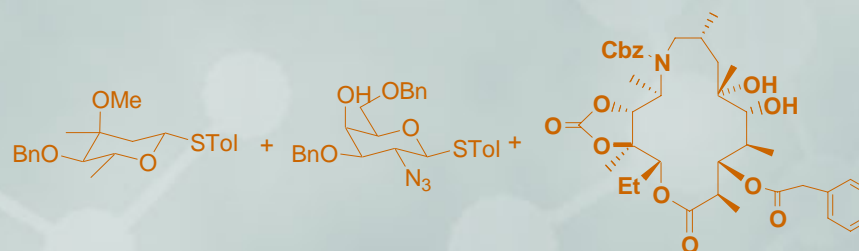
Instrument: CombiFlash Sq16x
Column: RediSep 12g silica gel
Loading: 100 mg
Eluent: EtOAc/Hexane gradients
Flow Rate: 10 ml/min
Run time: 15 min.



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Macrolide Library by OPopS™

Instrument: CombiFlash Sq16x
Column: RediSep 12g silica gel
Loading: 100 mg
Eluent: EtOAc/Hexane gradients
Flow Rate: 10 ml/min
Run time: 14 min.



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Acknowledgement

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