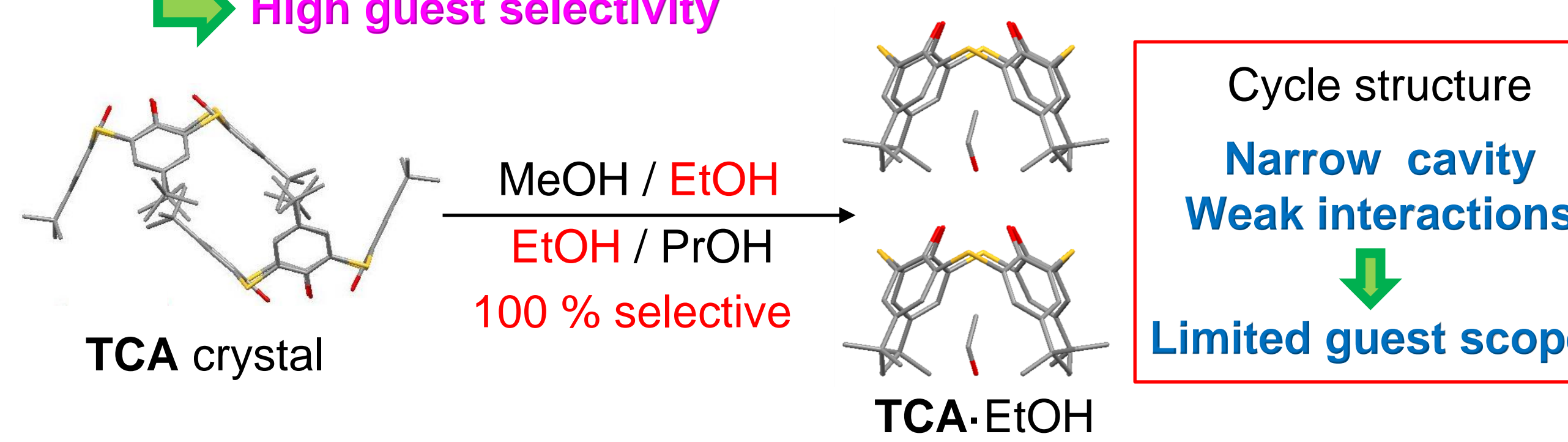
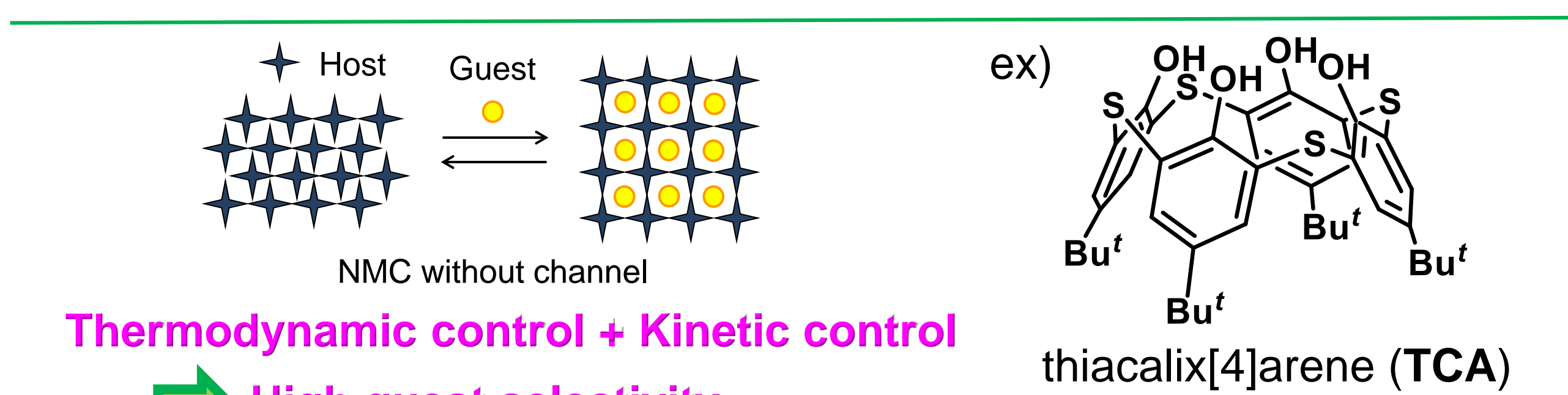
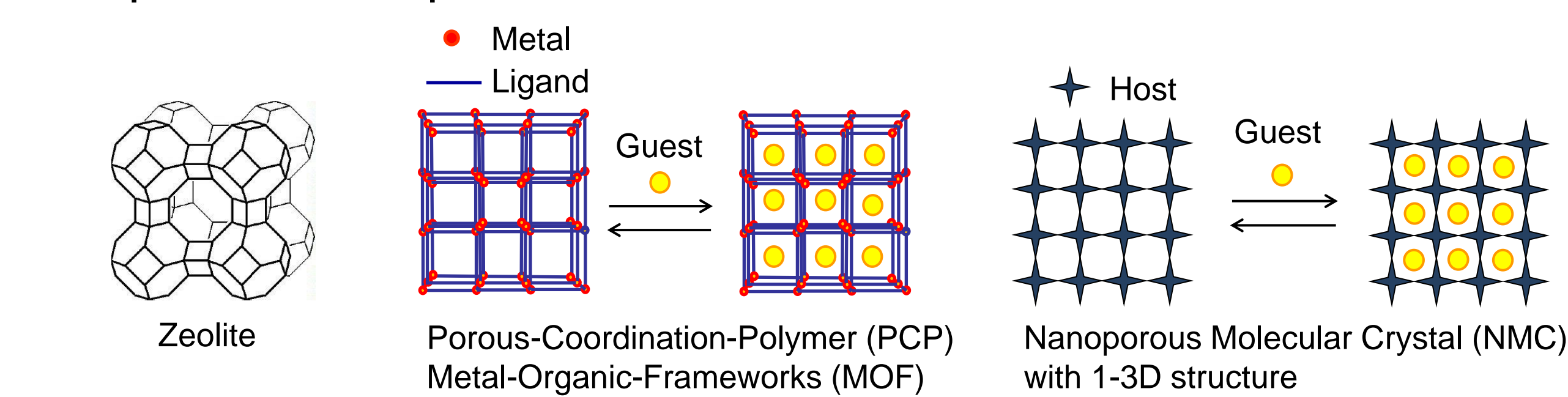


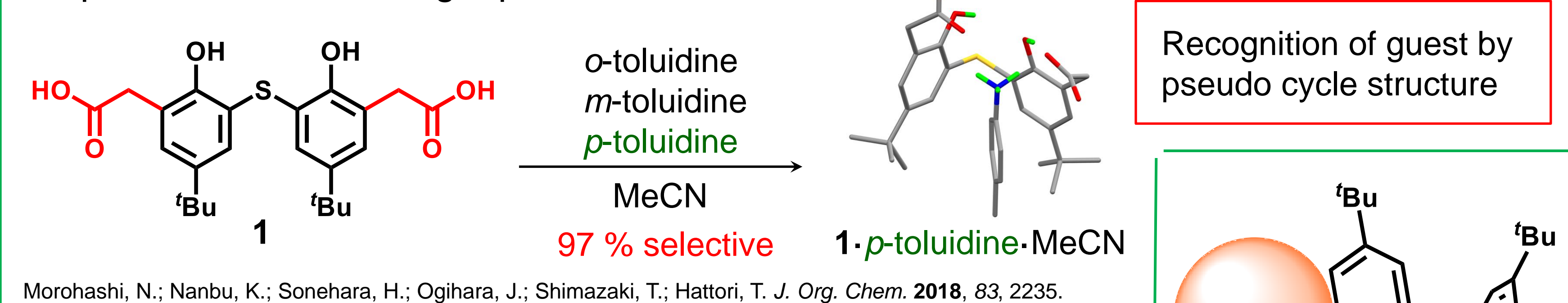
Introduction

◆ Representative porous solid materials

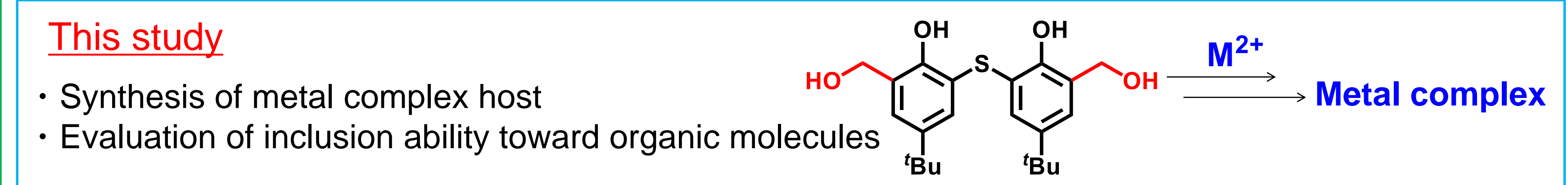
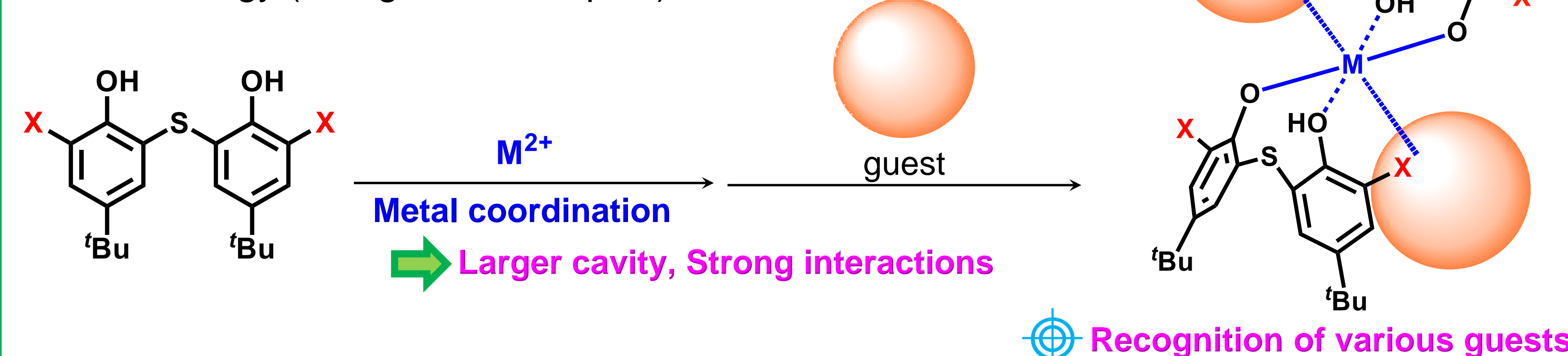


Morohashi, N.; Noji, S.; Nakayama, H.; Kudo, Y.; Tanaka, S.; Kabuto, C.; Hattori, T. *Org. Lett.* **2011**, 13, 3292.

◆ Open-chain host having a partial structure of TCA

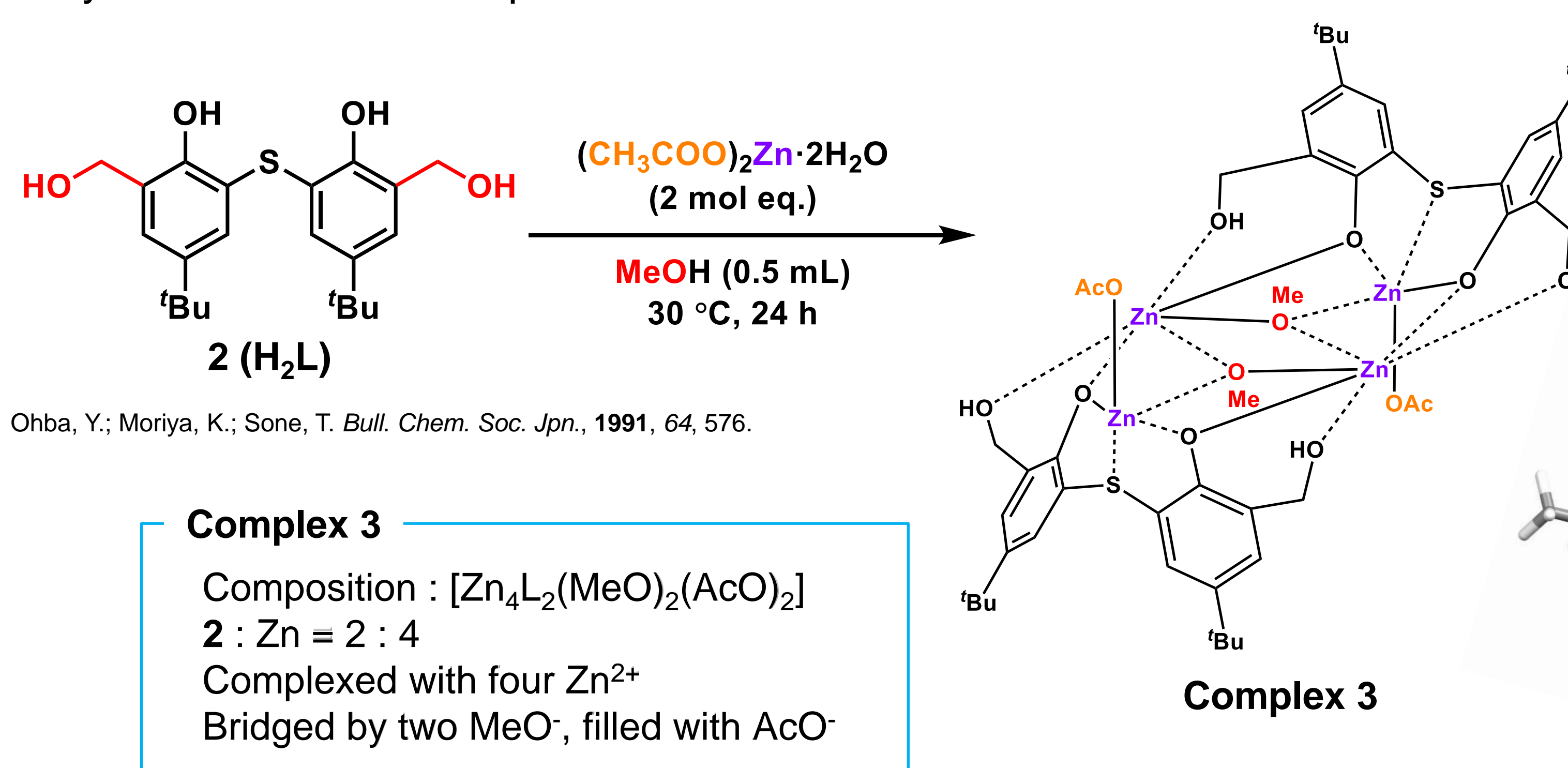


◆ Next strategy (Using metal complex)

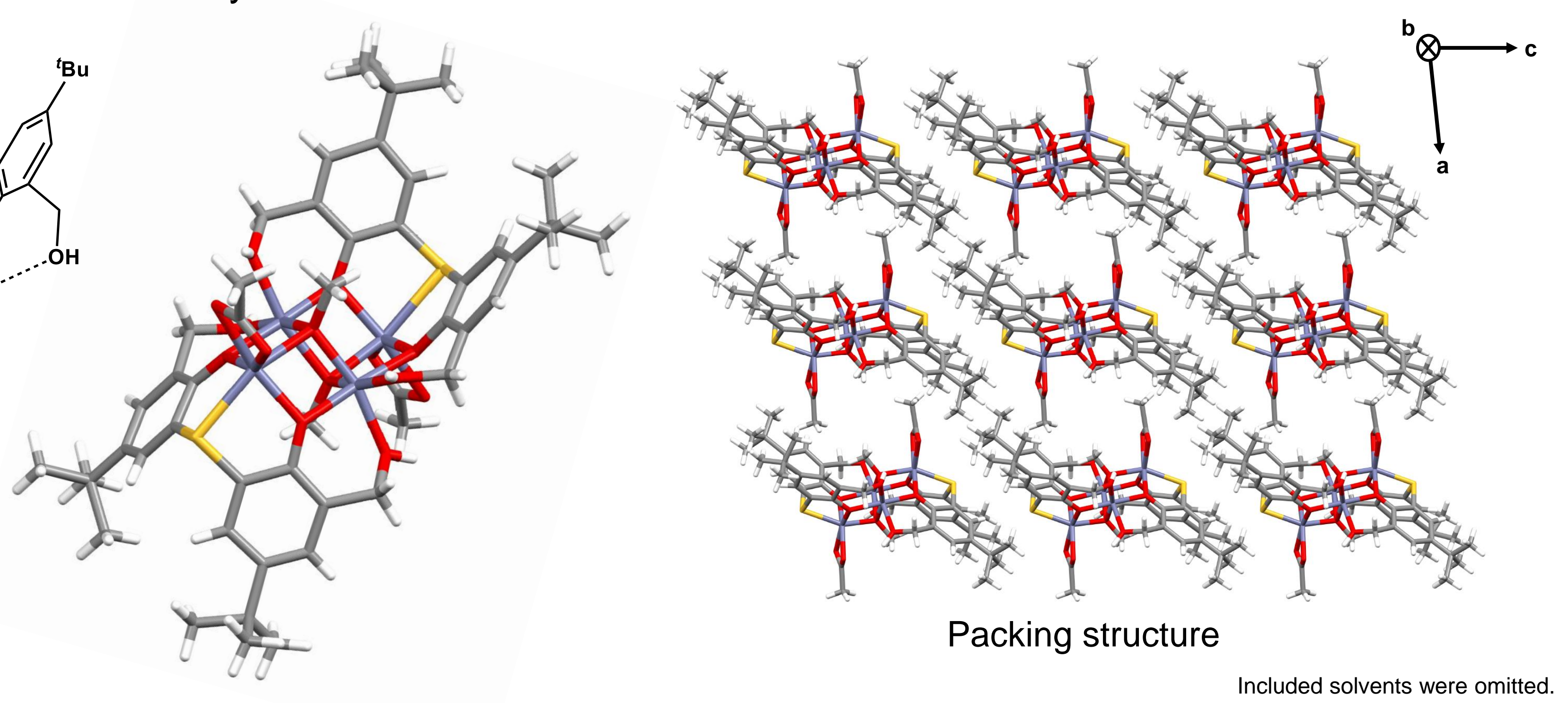


Results and Discussions

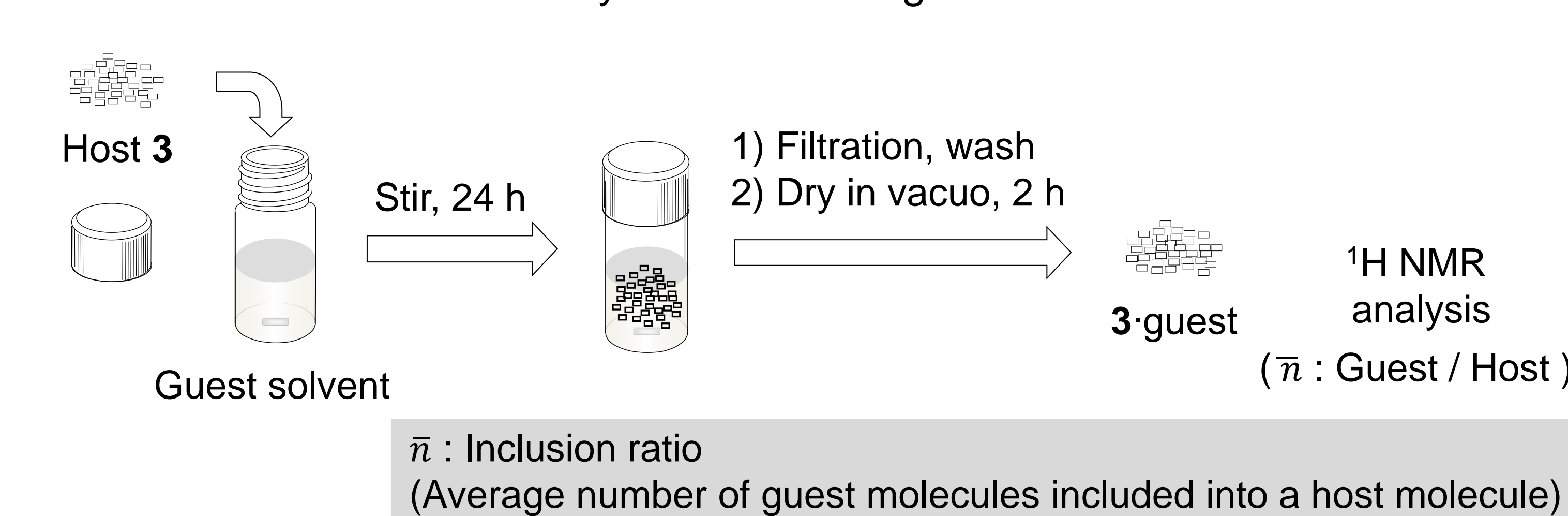
◆ Synthesis of metal complex host 3



◆ X-ray structure of 3



◆ Evaluation of inclusion ability of 3 toward organic molecules



10 mol eq. for 3 (30 °C)					2 mol eq. for 3 (30 °C)				
entry	guest	solvent	n̄		entry	guest	solvent	n̄	
1		hexane	- ^a		1		MeOH	1.9	
2		hexane	- ^a		2		MeOH	2.0	
3		hexane	- ^a		3		MeOH	1.7	
4		hexane	- ^a		4		MeOH	1.4	
5		MeOH	- ^a		5		MeOH	1.4	
6		MeOH	2.0		6		MeOH	1.3	

◎ 3 included various sizes carboxylic acid.

◎ High quantitativity

! Ligand exchange with the acetate ions occurred.

◆ Competitive inclusion of regioisomers of anisic acid and naphthoic acid

Each 2 mol eq. for 3 (60 °C)					
entry	guest	solvent	S [%]	n̄	
1		MeOH	100 (o-)	2.0	
2		MeOH	100 (1-)	1.6	

◎ High inclusion ratio & ◎ 100 % selectivity

Packing structure of 3·o-anisic acid, Packing structure of 3·1-naphthoic acid

Included solvents were omitted.

High selectivity of 3 for these regioisomers was owing to difference in steric hindrance.

Summary

