

Solid-phase synthesis of peptoids with structure-inducing *tert*-butyl side chains: A unique challenge finally met

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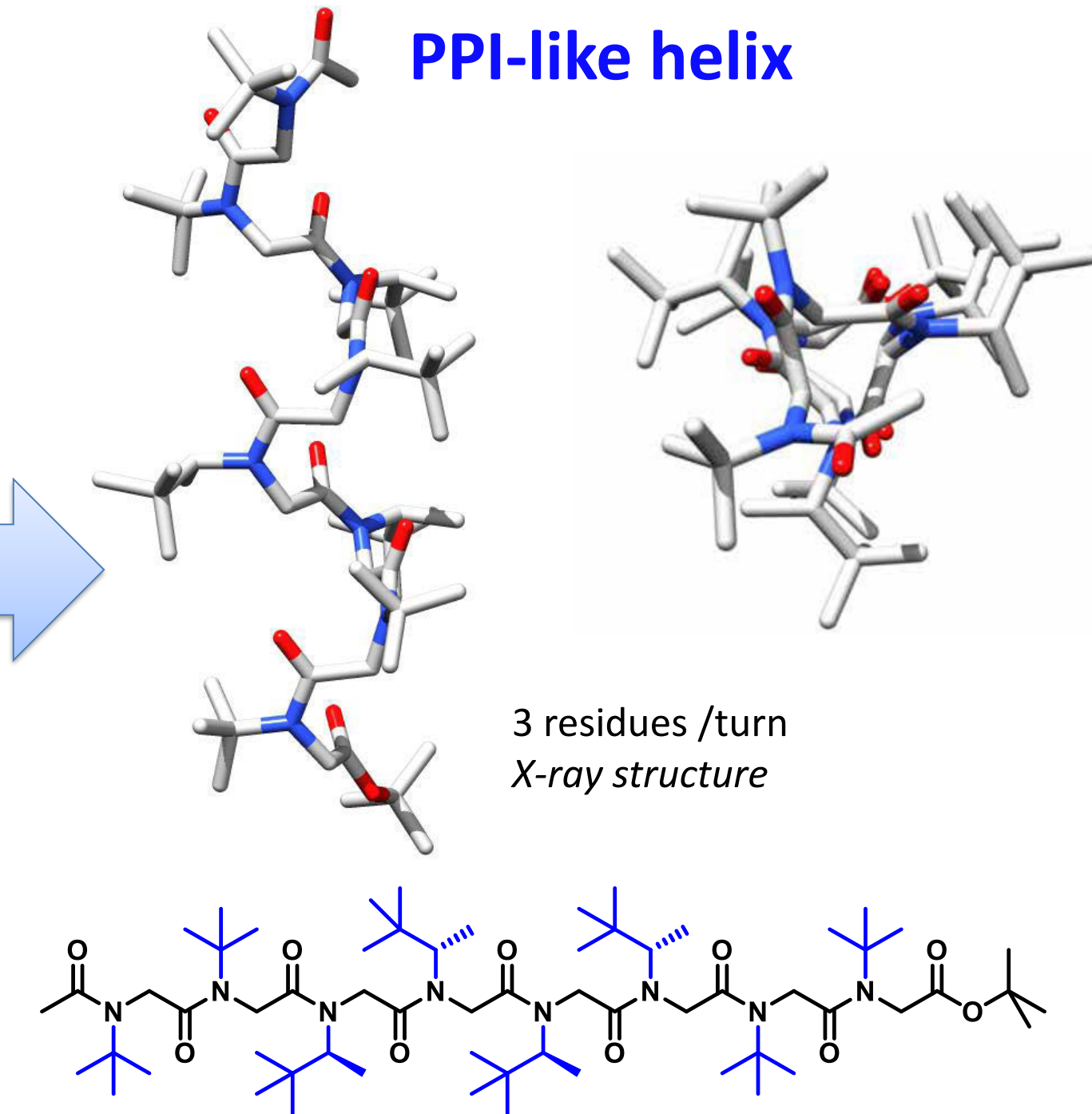
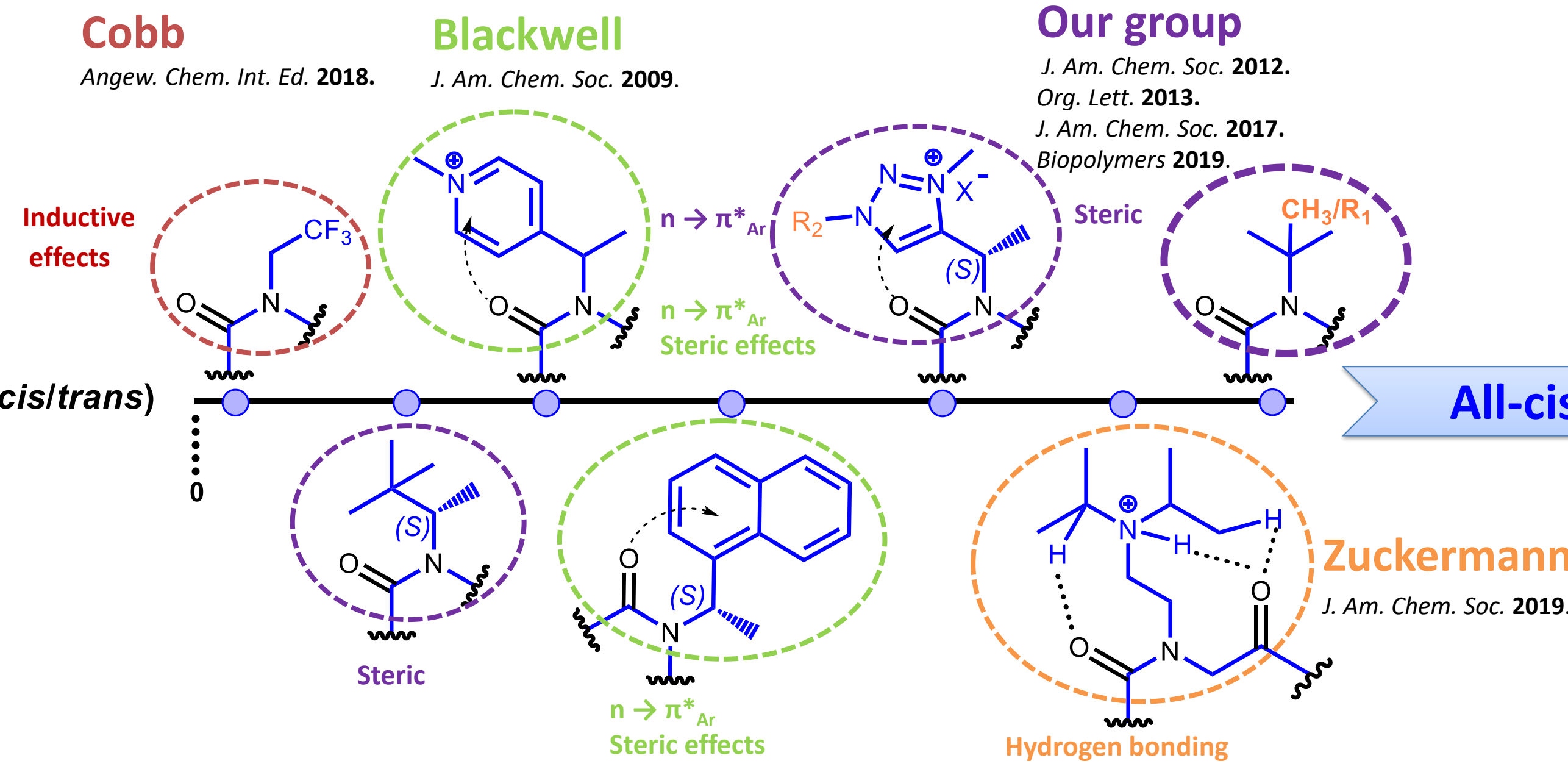
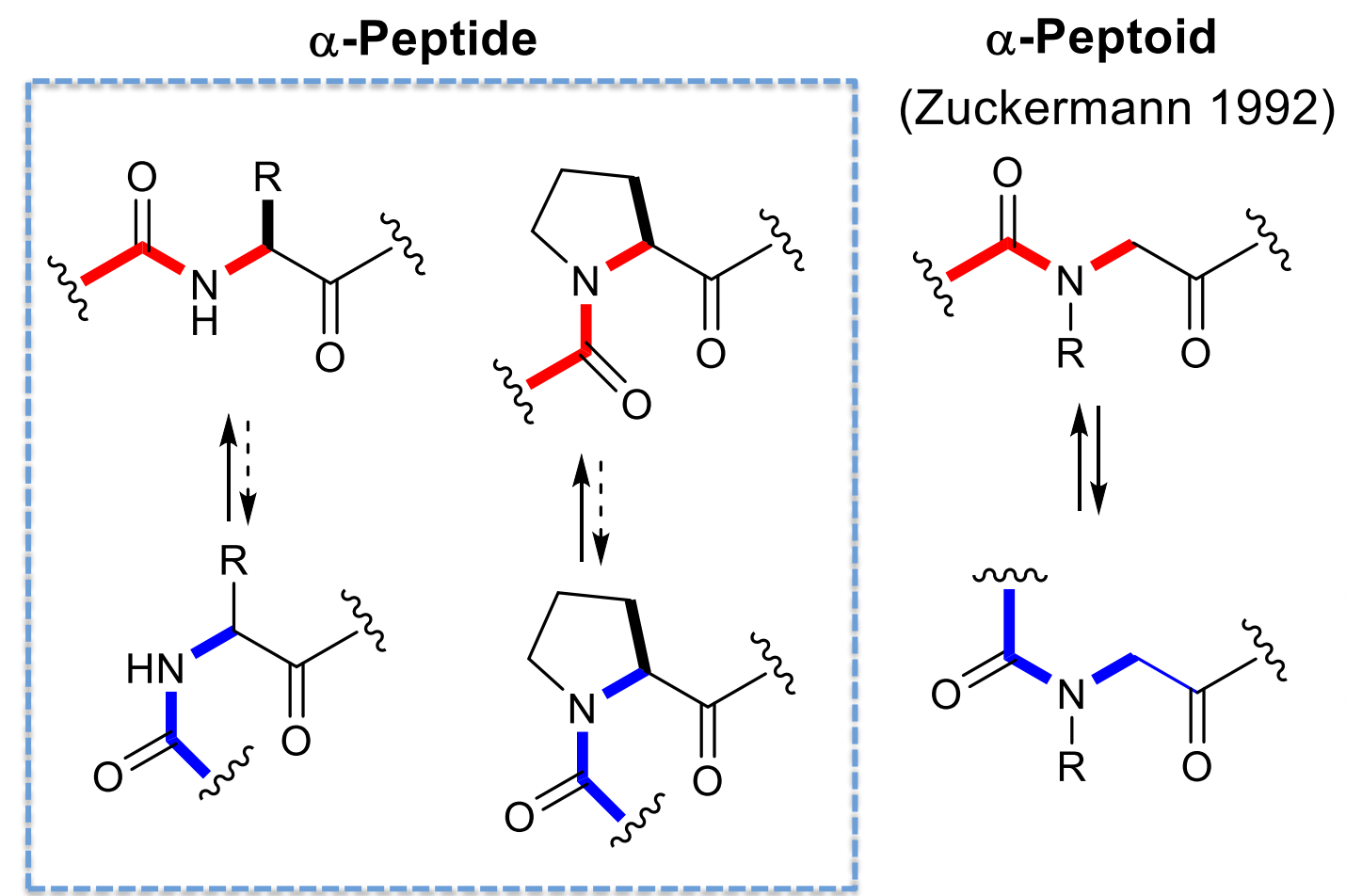
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Peptoids as peptidomimetic foldamers

Main side chains favoring *cis* peptoid amide bonds

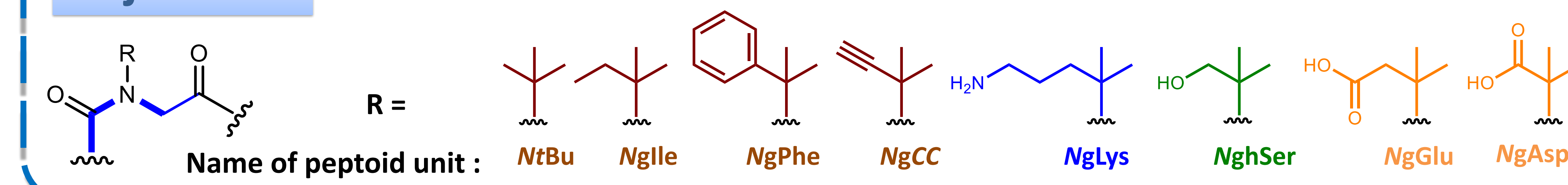


Oligomers of N-substituted glycines

- Efficient and scalable submonomer synthesis
- Great potential for diversity
- Higher proteolytic stability than peptides
- Better biodisponibility

Objectives

Rapid access to peptoid oligomers containing structure-inducing *tert*-butyl side chains



Homogeneous and robust helix comprising only aliphatic residues

- Right-handed PPI-type helix
- Remarkable conformational regularity
- Longest solid-state structure for linear peptoids

Roy, O.; Dumontell, G.; Faure, S.; Jouffret, L.; Kriznik, A.; Taillefumier, C. *J. Am. Chem. Soc.* 2017, 139, 13533–13540.

Incorporation of peptoid units bearing these side chains by solid-phase synthesis ?

