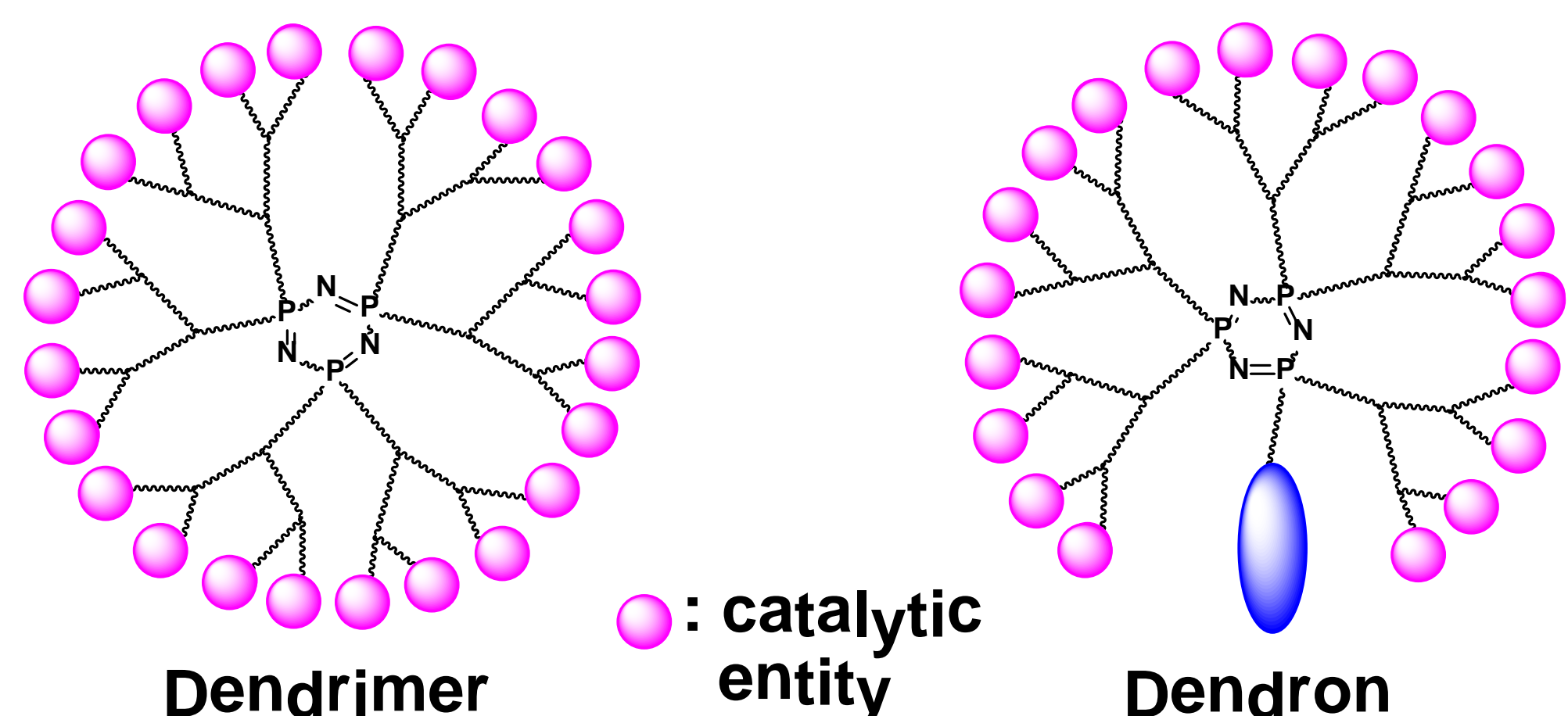


Jean-Pierre MAJORAL,^a Anne-Marie CAMINADE,^a Armelle OUALI,^a Michel KELLER,^a Arnaud PERRIER,^a Laurie TRAVERS,^a Oliver REISER^b

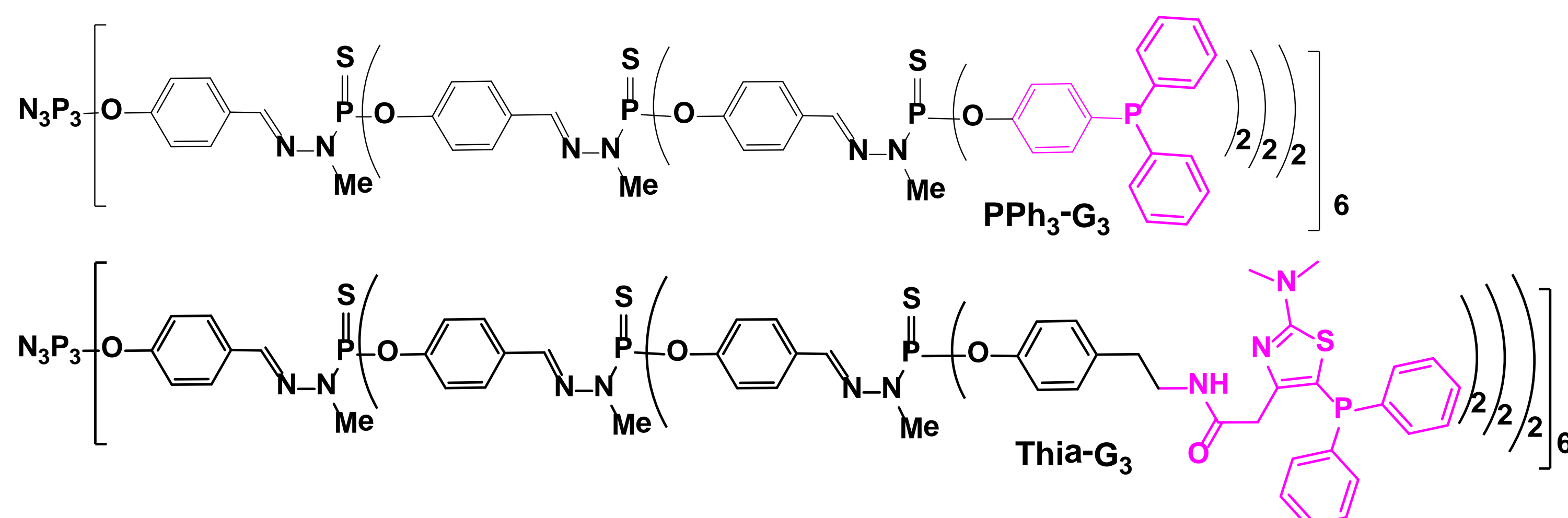
^a Laboratoire de Chimie de Coordination du CNRS, 205 route de Narbonne, 31077 Toulouse Cedex 4, France.

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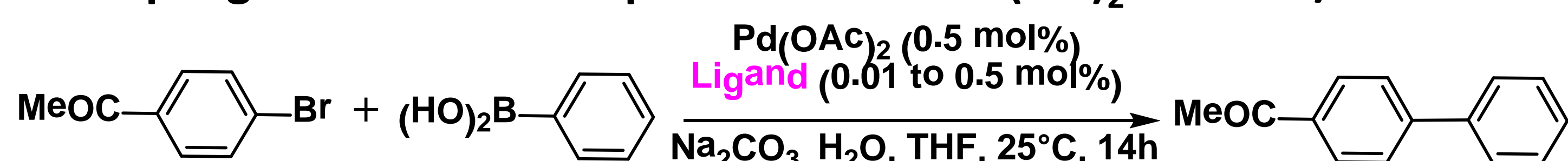
Catalytic entities immobilized as terminal groups of dendrimers and dendrons



Efficient and recyclable dendritic catalysts to dramatically reduce Pd leaching in Suzuki coupling



Coupling of 4-bromoacetophenone and PhB(OH)₂ in water/THF^a



Ligand	mol %	Yield ^b	Pd leaching
PPh ₃	0.5	74	2227 ppm
Mono-thia	0.5	95	1400 ppm
PPh ₃ -G ₁	0.04	78	173 ppm
Thia-G ₁	0.04	80	< 0.55 ppm
PPh ₃ -G ₃	0.01	75	
Thia-G ₃	0.01	80	

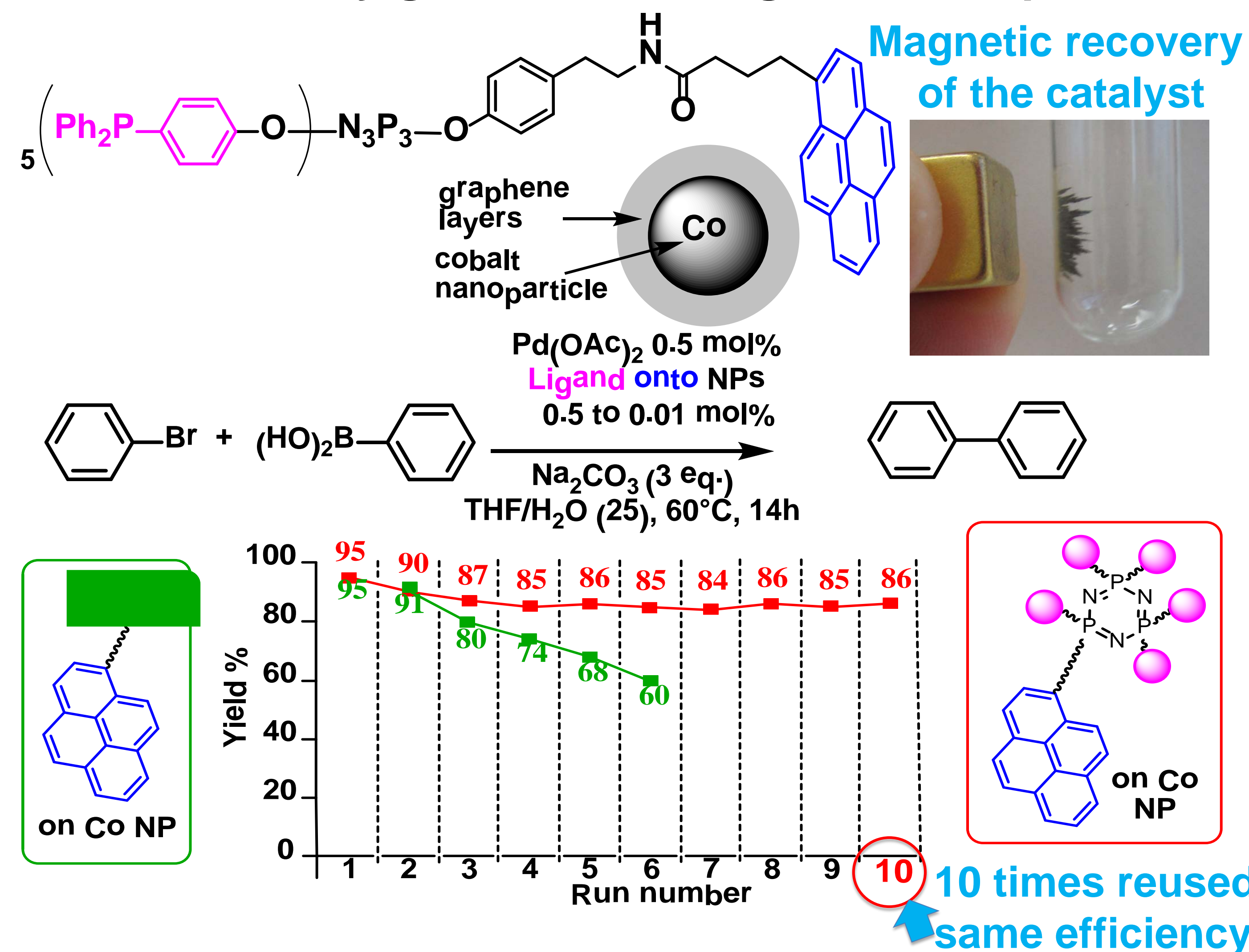
↑ met the requirements of EU pharmaceutical industry

Recycling and reuse

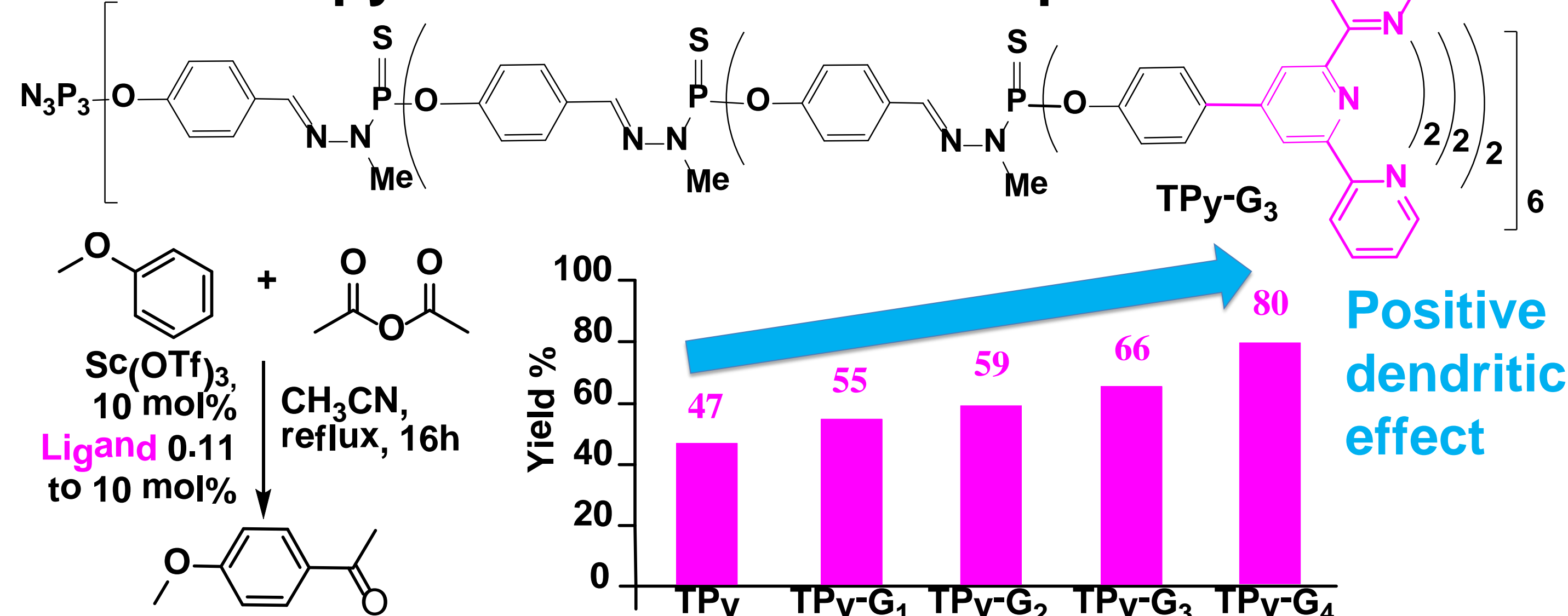
Ligand	Yield run 1	Yield run 2	Yield run 3	Yield run 4	Yield run 5
PPh ₃ -G ₁	95	80	50	-	-
Thia-G ₁	94	95	96	94	95

* An efficient and recyclable dendritic catalyst able to dramatically reduce palladium leaching in Suzuki couplings. Keller M., Hameau A., Spataro G., Ladeira S., Caminade A.M., Majoral J.P., Ouali A. *Green Chemistry*, in press, DOI: 10.1039/C2GC35832H

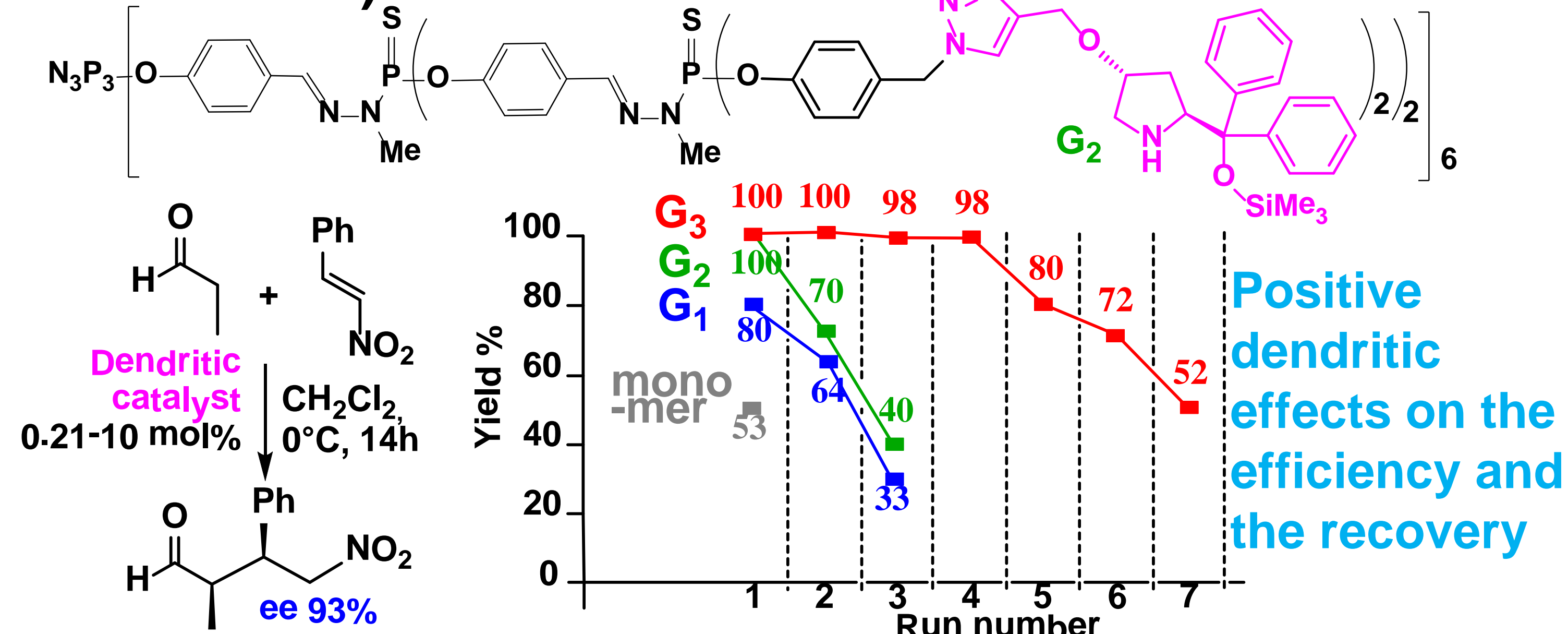
Efficient and recyclable pyrene-dendron catalyst non covalently grafted onto magnetic nanoparticles



Positive dendritic effect in Friedel-Crafts acylation with terpyridine-Rare earths complexes



Organocatalyzed Michael additions (no metal, no base)



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