

Suzuki Coupling

A



18 catalysts

10 bases

8 solvents

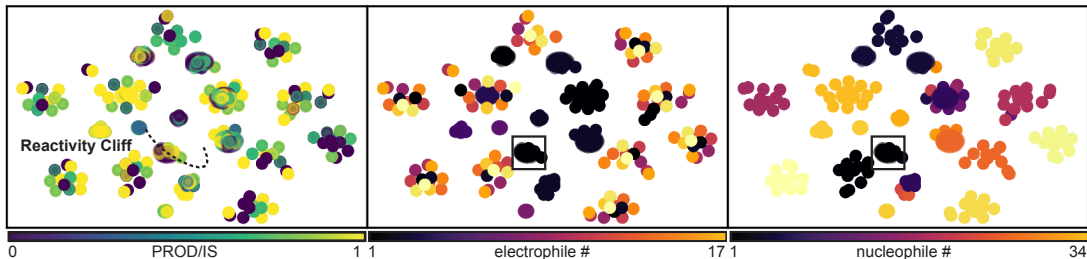
$w_{\text{nucleophile}} \times 3$



17 electrophiles

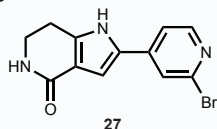
34 nucleophiles

$$RFP = (FP_{\text{electrophile}}) \cdot w_{\text{electrophile}} + (FP_{\text{nucleophile}}) \cdot w_{\text{nucleophile}}$$

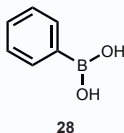


B

Selected Cluster



+

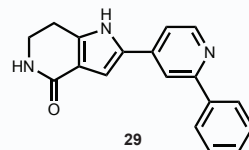


8 catalysts

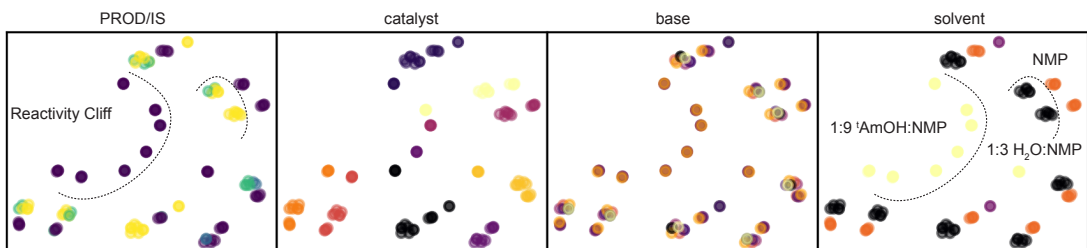
6 bases

4 solvents

$w_{\text{catalyst}} \times 3, w_{\text{solvent}} \times 3$



$$RFP = (FP_{\text{catalyst}}) \cdot w_{\text{catalyst}} + (FP_{\text{catalyst}}) \cdot w_{\text{catalyst}} + (FP_{\text{solvent}}) \cdot w_{\text{solvent}}$$



High
Medium
Low
Zero

XPhos Pd G3
'Bu₃P Pd G2
'BuXPhos Pd G3
DTBPF Pd G3
SPhos Pd G2
RuPhos Pd G3
BrettPhos Pd G3
APhos Pd G3

K₃PO₄
MTBD
BTMG
P₂Et
BTTP
Cs₂CO₃

1:3 H₂O:NMP
1:3 H₂O:DMSO
NMP
1:9 'AmOH:NMP