

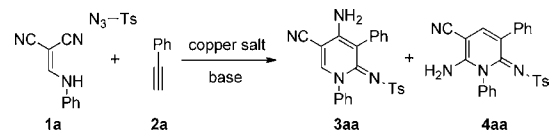
Correction to Copper-Catalyzed Three-Component Reaction: Solvent-Controlled Regioselective Synthesis of 4-Amino- and 6-Amino-2-iminopyridines

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The chemical equations are missing in Tables 1–3. The complete Tables are shown below.

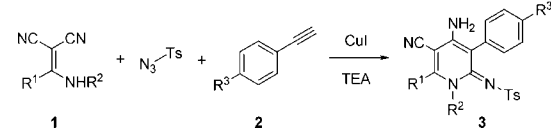
Table 1. Three-Component Reaction of 2-[(Amino)methylene]malononitriles, Sulfonyl Azide, and Alkynes^a



entry	base (equiv)	copper salt	solvent	time (h)	yield (%) ^c	
					3aa	4aa
1	DBU (1.0)	CuI	THF	12	mixture	
2	TEA (1.0)	CuI	THF	10	48	—
3	TEA (2.0)	CuI	THF	1	87	—
4	TEA (2.0)	CuI ^b	THF	8	85	—
5	pyridine (2.0)	CuI	THF	12	5	—
6	K ₂ CO ₃ (2.0)	CuI	THF	12	9	—
7	Cs ₂ CO ₃ (2.0)	CuI	THF	12	21	—
8	TEA (2.0)	CuBr	THF	2	84	—
9	TEA (2.0)	Cu(OAc) ₂	THF	5	62	—
10	TEA (2.0)	CuBr ₂	THF	5	28	—
11	TEA (2.0)	CuI	CH ₂ Cl ₂	2	80	—
12	TEA (2.0)	CuI	CH ₃ CN	12	61	15
13	TEA (2.0)	CuI	DMF	12	38	40
14	TEA (2.0)	CuI	DMSO	12	33	35
15	TEA (2.0)	CuI	DMF	12	15	65
16	TEA (2.0)	CuI	DMF	12	5	76

^aReaction conditions: **1a** (1.0 mmol), TsN₃ (1.1 mmol), **2a** (1.1 mmol), copper salt (0.1 mmol), solvent (10.0 mL), for entries 1–14, under air, rt; for entry 15, under N₂, rt; for entry 16, under N₂, 50 °C. ^b0.05 mmol. ^cIsolated yields.

Table 2. Multicomponent Reactions for the Synthesis of 4-Amino-2-iminopyridines 3^a

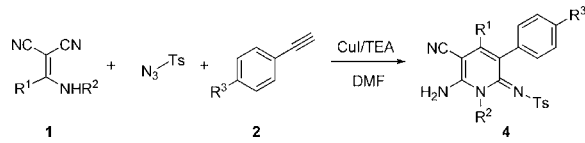


entry	1	R ¹ /R ²	2	R ³	3	yield (%) ^b
1	1a	H/Ph	2a	H	3aa	87
2	1a	H/Ph	2b	Me	3ab	82
3	1a	H/Ph	2c	MeO	3ac	80
4	1b	H/ <i>p</i> -MeC ₆ H ₄	2a	H	3ba	88
5	1b	H/ <i>p</i> -MeC ₆ H ₄	2b	Me	3bb	85
6	1b	H/ <i>p</i> -MeC ₆ H ₄	2c	MeO	3bc	79
7	1c	H/ <i>p</i> -MeOC ₆ H ₄	2a	H	3ca	89
8	1c	H/ <i>p</i> -MeOC ₆ H ₄	2b	Me	3cb	86
9	1c	H/ <i>p</i> -MeOC ₆ H ₄	2c	MeO	3cc	82
10	1d	H/ <i>o</i> -MeC ₆ H ₄	2a	H	3da	83
11	1e	H/ <i>o</i> -ClC ₆ H ₄	2a	H	3ea	82
12	1f	H/ <i>m</i> -ClC ₆ H ₄	2a	H	3fa	81
13	1g	H/ <i>p</i> -ClC ₆ H ₄	2a	H	3ga	81
14	1h	H/PhCH ₂	2a	H	3ha	54
15	1i	Me/Ph	2a	H	3ia	59

^aReaction conditions: **1** (1.0 mmol), TsN₃ (1.1 mmol), **2** (1.0 mmol), CuI (0.1 mmol), TEA (2.0 mmol), THF (10 mL), air, 25 °C. ^bIsolated yields.

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Table 3. Multicomponent Reactions for the Synthesis of 6-Amino-2-iminopyridines 4^a


entry	1	R ¹ /R ²	2	R ³	3	4	yield (%) ^b	
							3	4
1	1a	H/Ph	2a	H	3aa	4aa	5	76
2	1a	H/Ph	2b	Me	3ab	4ab	10	71
3	1b	H/ <i>p</i> -MeC ₆ H ₄	2a	H	3ba	4ba	12	65
4	1b	H/ <i>p</i> -MeC ₆ H ₄	2b	Me	3bb	4bb	8	58
5	1c	H/ <i>p</i> -MeOC ₆ H ₄	2a	H	3ca	4ca	11	58
6	1c	H/ <i>p</i> -MeOC ₆ H ₄	2b	Me	3cb	4cb	9	51
7	1d	H/ <i>o</i> -MeC ₆ H ₄	2a	H	3da	4da	5	75
8	1d	H/ <i>o</i> -MeC ₆ H ₄	2b	Me	3db	4db	—	68
9	1e	H/ <i>o</i> -ClC ₆ H ₄	2a	H	3ea	4ea	—	79
10	1e	H/ <i>o</i> -ClC ₆ H ₄	2b	Me	3eb	4eb	—	72
11	1f	H/ <i>m</i> -ClC ₆ H ₄	2a	H	3fa	4fa	—	70
12	1f	H/ <i>m</i> -ClC ₆ H ₄	2b	Me	3fb	4fb	—	66
13	1g	H/ <i>p</i> -ClC ₆ H ₄	2a	H	3ga	4ga	—	67
14	1g	H/ <i>p</i> -ClC ₆ H ₄	2b	Me	3gb	4gb	—	56
15	1a	H/Ph	2c	MeO	3ac	4ac	38	—
16	1h	H/PhCH ₂	2a	H	3ha	4ha	—	—
17	1i	Me/Ph	2a	H	3ia	4ia	—	—

^aReaction conditions: **1** (1.0 mmol), TsN₃ (1.1 mmol), **2** (1.0 mmol), CuI (0.1 mmol), TEA (2.0 mmol), DMF (10 mL), N₂, 50 °C.^bIsolated yields.