

GREEN SYNTHESIS OF POLYSUBSTITUTED QUINOLINES AND XANTHENE DERIVATIVES PROMOTED BY TARTARIC ACID AS A NATURALLY GREEN CATALYST UNDER SOLVENT-FREE CONDITIONS

Farzaneh Mohamadpour ^a, Malek Taher Maghsoodlou ^{a*}, Mojtaba Lashkari ^b,
Reza Heydari ^a, Nourallah Hazeri ^a

^a Faculty of Science, University of Sistan and Baluchestan, Zahedan P.O. Box 98135-674, Iran

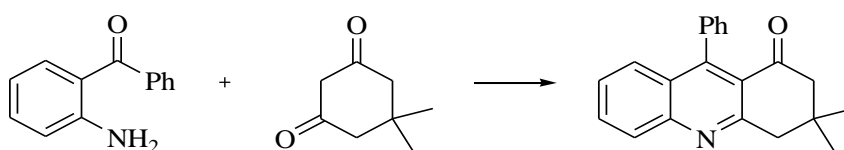
^b Faculty of Science, Velayat University, P. O. Box 9911131311 Iranshahr, Iran

*e-mail: mt_maghsoodlou@yahoo.com; mt_maghsoodlou@chem.usb.ac.ir;

phone: (+98) 541 2446565; fax: (+98) 541 2446565

Table 1S

Optimization of the reaction condition for the synthesis of 5a*.

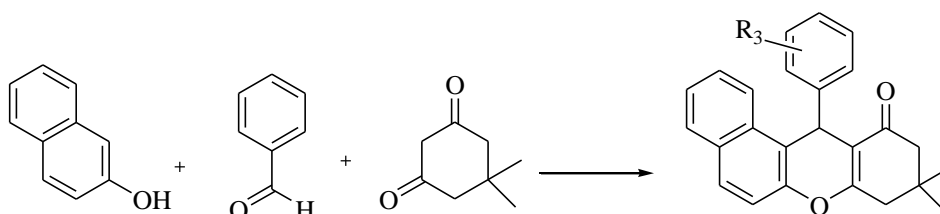


Entry	Tartaric acid, mol%	Temperature, °C	Time, min	Isolated Yields, %
1	Catalyst free	70	480	Not product
2	5	70	25	63
3	10	70	15	76
4	15	70	10	94
5	15	room temperature	480	trace
6	15	40	30	45
7	15	60	10	71
8	15	80	10	94
9	20	70	10	95

* Reaction conditions: 2-aminobenzophenone (1.0 mmol), carbonyl compounds (1.0 mmol) and tartaric acid were heated under various temperatures for the appropriate time.

Table 2S

Optimization of the reaction condition for the synthesis of 9a*.

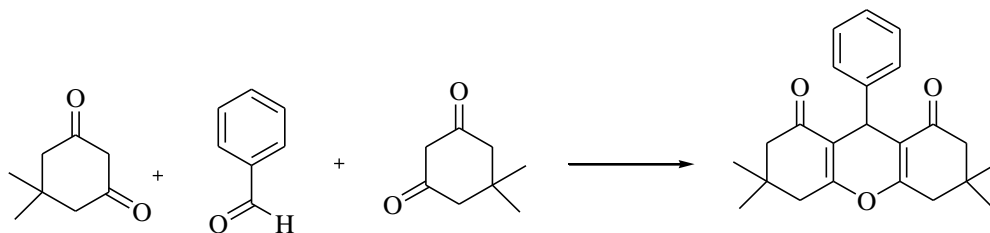


Entry	Tartaric acid, mol%	Temperature, °C	Time, min	Isolated Yields, %
1	Catalyst free	70	480	trace
2	5	70	30	64
3	10	70	15	72
4	15	70	10	89
5	15	room temperature	480	trace
6	15	40	55	52
7	15	60	25	71
8	15	80	10	89
9	20	70	10	90

*Reaction conditions: β -naphthol (1.0 mmol), benzaldehydes (1.0 mmol), dimedone (1.0 mmol) and tartaric acid were heated under various temperatures for the appropriate time.

Table 3S

Optimization of the reaction condition for the synthesis of 11a*.

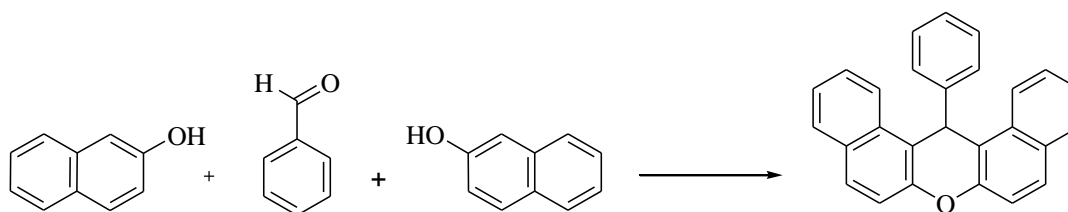


Entry	Tartaric acid, mol%	Temperature, °C	Time, min	Isolated Yields, %
1	Catalyst free	70	480	trace
2	5	70	25	56
3	10	70	15	78
4	15	70	10	92
5	15	room temperature	480	trace
6	15	40	30	69
7	15	60	10	83
8	15	80	10	92
9	20	70	10	91

*Reaction conditions: dimedone (2.0 mmol), benzaldehydes (1.0 mmol) and tartaric acid were heated under various temperatures for the appropriate time.

Table 4S

Optimization of the reaction condition for the synthesis of 13a*.



Entry	Tartaric acid, mol%	Temperature, °C	Time, min	Isolated Yields, %
1	Catalyst free	70	480	trace
2	5	70	40	53
3	10	70	25	71
4	15	70	15	87
5	15	room temperature	480	trace
6	15	40	45	62
7	15	60	20	74
8	15	80	10	89
9	20	70	10	87

*Reaction conditions: β -naphthol (2.0 mmol); benzaldehydes (1.0 mmol) and tartaric acid were heated under various temperatures for the appropriate time.