



## Bipyridinium-carboxylate ligands towards photo- and thermo-chromic porous coordination polymers

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Mots-clés	bipyridinium [7], multifunctional molecular materials [8], photochromism [9], porous coordination polymers [10], thermochromism [11]
Résumé en anglais	<p>Porous coordination polymers (PCP) or metal–organic frameworks (MOF) have focused attention going from synthetic strategy to applications in heterogeneous catalysis, molecular recognition and gas storage. Up to now the main strategy to increase the sorption abilities has been to introduce coordinatively unsaturated metal centres. Only few examples have been reported based on the assembly of cationic bridging ligands. Our original approach consists in combining the coordination versatility of carboxylate functions, commonly used in this field, to electro-active viologen derivatives in order to synthesize new porous coordination polymers for gas storage and redox mediators with optical and magnetic properties. The designed ligands are based on N-substituted-4,4'-bipyridinium monocation and N,N'-disubstituted-4,4'-bipyridinium dication bearing one or several carboxylate groups. In addition to act as charge-separated organic linkers, these pyridinium-carboxylate ligands will i) afford a cationic surface to enhance the interactions with guests and ii) exhibit reversible redox states involving monocationic radicals with good stability and large absorption coefficients in the visible range. Some of our new results will be presented here and a particular attention will be dedicated to compounds that also exhibit thermo-, solvato- and photo-chromic behavior.</p>
URL de la notice	<a href="http://okina.univ-angers.fr/publications/ua12476">http://okina.univ-angers.fr/publications/ua12476</a> [12]

### Liens

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