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**STRUCTURAL AND PHOTOPHYSICAL PROPERTIES OF COODINATION POLYMERS**

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In this work we are going to show how photoluminescent properties of Ag(I)-based coordination polymers are adjusted by changing the building blocks in the self-assembly process. A series of luminescent Ag(I)-based coordination polymers have been self-assembled from two flexible dicyanomethylene ligands bearing diethylene and triethylene glycol spacers and silver salts in different solvents. Single crys tal X–ray diffraction analyses reveal a variety of geometries around the Ag(I) ion, resulting in mono, bi and tetranuclear networks with intriguing topologies. The coordination networks showed 2D architectures through coordination of the cyano and glycolic groups to the Ag(I) ions. A 3D supramolecular arrangement of the coordination networks was formed through weak ?…? and Ag(I)…? interactions as well as the hydrogen bonds between water molecules and ClO4— and BF4— counterions. Ag(I) coordination networks display green to yellow emissions in the solid state, with quantum yields (?em) varying from 0.013 to 0.085. The emission properties of the silver(I) coordination networks are attributed to intraligand charge transfer and metal-perturbed intraligand transitions. Structural properties, such as the presence of Ag…? interactions and multiple silver(I) centers of in the coordination networks play an import role in the photophysical properties of these compounds.