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## Creation of New Conceptual Ionic Crystals Based on Metalloligand Approach

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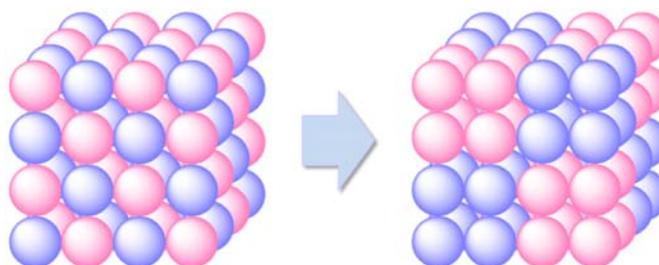
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Design and creation of supramolecular coordination compounds have been a research subject of considerable attention. In this subject, a self-assembly method, which spontaneously affords molecular aggregates from organic building blocks and metal ions, is commonly employed to construct highly organized structures. On the other hand, we have developed a metalloligand approach, in which pre-designed metal complexes with thiol-containing ligands are stepwise treated with different kinds of metal ions.<sup>[1-2]</sup> We have shown that the monogold(I) complex with two D-penicillaminates (D-pen),  $[\text{Au}(\text{D-pen-S})_2]^{3-}$ , functions as a multidentate metalloligand to produce a variety of supramolecular coordination species that show unique structure and properties. Recently, we found that digold(I) complexes with mixed D-pen and diphosphine ligands serve a flexible, functional metalloligand to create fascinating chiral metallosupramolecular structures.<sup>[3-4]</sup> In this presentation, we will present several metallosupramolecular ionic crystals, which feature a new conceptual arrangement of ionic species, such as a separate aggregation of complex cations and inorganic anions.



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### References:

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