Tight Electronic Coupling within Loosely Held Polyaromatic Cavities: Tris(N-Salicylideneaniline)-Derived Ligands and Receptors

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**Dynamic 2-D Conjugation**

Structural distortion of planar conjugated systems can modify the effective conjugation “area” sampled by electrons and excitons.

**Signal-Amplifying “Inverted Antenna”**

The orientation-dependent resonance energy transfer (RET) can be exploited as a powerful signal amplification mechanism.

\[
k_{RET} \propto \Phi_D \left( \frac{\kappa^2}{\gamma D R DA} \right) \int_0^\infty F_D(\lambda) F_A(\lambda) \lambda^4 d\lambda
\]

\[
k_{RET} \propto K \exp \left( -\frac{2\gamma DA}{L} \right) J(\lambda)
\]

**Long Range Conformational Transmission**

Mechanical coupling is a viable alternative for electronic coupling in long-range signal transmission.

Global helicity predetermined by local chirality residing on 2˚ alcohol groups.

**Allosteric Switching**

Artificial systems displaying self-regulatory properties continue to remain an engaging challenge.