A molecular clip throws new light on the complexes formed by a family of cyclam cored dendrimers with Zn(II) ions. Efficient energy transfer in the heteroleptic complexes.

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**Figure S1.** ESI-mass spectra of CH2Cl2:CH3CN (1:1 v/v) solutions of G1 (a) and G2 (b) (3.0 × 10⁻⁶ M), with 0.5 equivalents of Zn(CF3SO3)2. The m/z value shown for each species corresponds to the m/z experimental value of the most abundant monoisotopic peak.
$^1$H NMR spectra of G0 in CD$_3$CN/CD$_2$Cl$_2$ 1:1 (v/v) solution upon addition of 0.25 (Figure S1) equivalents of Zn(CF$_3$SO$_3$)$_2$ were recorded at different temperatures between 238 and 328 K. The range is limited by the solubility of the dendrimer at low temperature and by the boiling temperature of the CD$_2$Cl$_2$ solvent at the other extreme. At 268 K a broadening of the Ar-CH$_2$-N and N-CH$_2$-CH$_2$-N signals indicates the expected decrease in the exchange rate constants between G0 and [Zn(G0)$_2$]$^{2+}$.

**Figure S2.** NMR spectra of G0 (1 $\times$ 10$^{-3}$ M) upon addition of 0.25 equivalent of Zn(CF$_3$SO$_3$)$_2$ in a CD$_3$CN/CD$_2$Cl$_2$ 1:1 (v/v) solution registered at different temperatures in the range 238-328 K.