

## SEMINAIRE DE LA MATIERE CONDENSEE

# Laboratoire Léon Brillouin



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**Quasi-2D quantum magnets comprised of strong  
hydrogen bonds and pyrazine ligands.**

**Mardi 18 mars 2008 à 14h 30**  
Salle de conférence 15 – Bâtiment 563

We are employing bifluoride,  $\text{HF}_2^-$ , as a synthon in the self-assembly of magnetic coordination polymers of various dimensionalities,  $d$ , where  $d$  can be controlled using appropriate ancillary organic ligands. Two classes of materials have been produced which consist of quasi-2D networks held together via very strong hydrogen bonds. These new systems demonstrate interesting magnetic properties ranging from long-range antiferromagnetic ordering to weak ferromagnetism. Similar to cyanide, azide, and other small ligands, our work suggests that M-F $\cdots$ H $\cdots$ F-M and M-F $\cdots$ H-O-M bridges can be exploited in analogous fashion to produce a wealth of new magnetic coordination polymers. Highlights of this work will be presented.

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