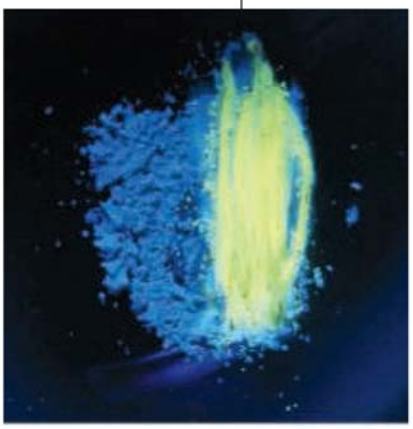
CHEMISTRY

Blue, Yellow, and Gold

Mechanochromic compounds, which undergo a change in color or luminescence when solid samples are crushed or ground, can serve as detectors of mechanical action, but examples of such compounds are rare. Ito *et al.* synthesized a compound in which two C_6F_5Au groups are linked by a *para* $CN(C_6H_4)NC$ ligand, and found that its photoluminescence changes from blue to yellow after grinding. Like other such compounds, its original luminescent state is restored upon dissolution and recrystallization, and this process could be repeated for 20 cycles without any decrease in luminescence. Structural and spectroscopic studies indicate that the long-lived blue emission in the crystal is intramolecular in origin and phosphorescent (a localized intraligand π–π^* transition), whereas the yellow emission appears to arise from an amorphous phase characterized by aurophilic interactions: intermolecular interactions between gold atoms. — PDS



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