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Electronic properties of Alkali-doped metal phthalocyanines

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The possibility to control the density of charge carriers in fullerenes by means of alkali intercalation has resulted in an impressively rich variety of electronic phenomena that originate from interaction-induced correlations. Well-known examples are superconductivity and the occurrence of Mott-Hubbard insulating states. Surprisingly, however, no other molecular system has been yet found that shows similarly rich behavior: experiments performed in the past never succeeded in finding metallic conductivity in any alkali-doped molecular compound other than the fullerenes. In this talk I will discuss a series of experiments that we have performed on metal-phthalocyanine compounds, in which we observe a behavior very similar to that observed fullerenes upon-alkali doping.