The intriguing class of *altan*-molecules

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As a result of a theoretical investigation on additive patterns in polycyclic systems,[1] we have introduced the *altan*-molecules, which are formed from parent totally fused neutral polycyclics upon substitution of outgoing C H bonds with C C bonds pointing towards alternant carbon atoms only of an outer annulene. The latter turns out to be a [4*n*]annulene, and is expected to host a paratropic current.[1b] The computational investigation of the altanisation process has led to the design of a paramagnetic closed-shell molecule ([12,5]coronene, or equivalently *altan*-[12]annulene)[2], and of aromatic anionic bowl-shaped molecules, e.g. altan-corannulene hexaanion.[3] The latter molecule, with three concentric loops of alternating tropicities which reverse changing the charge, actually forms half a cage of many C_{80} endohedral fullerenes, and could be a reasonable synthetic target. The altanisation design has been recently challenged as it has been shown to lead to a diatropic outer loop not only in *altan*-kekulene[1b], but also in *altan*-[10,5]-coronene.[4] We have recently unraveled this anomalous behaviour of the altanisation process, and we have found that several *altan*-molecules could be well added to the gamut of molecules, which are nowadays under intense experimental and theoretical scrutiny for the development of organic semiconductor devices.[6.]

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