

Abstract Submitted  
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**Janus particles at the planar water-oil interface** QIAN CHEN,  
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— Amphiphilic Janus particles (hydrophobic on one side, hydrophilic on the other)  
were placed at the planar water-oil interface at various surface coverage and found to  
self-assemble into two-dimensional crystals with long-range hexagonal order, which  
we studied by fluorescence and phase contrast microscopy. Surprising dependence is  
observed not only on the surface chemical makeup of the hydrophilic side but also on  
the Janus balance (i.e. the relative sizes of hydrophobic and hydrophilic portions),  
which is analogous to the HLB balance that characterizes molecular surfactants.

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