Using lateral capillary forces to compute by self-assembly

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Purpose

• Will tile sets that encode computations be more likely to defect formation?

• What rules must SA follow to orient successfully?
Materials and Methods

• Tiles were laser cut, sprayed with acrylic blue and the paint was cut to make defining patterns
• Each step involved moving one structure; interaction with another was termed a bond
• Tiles were shaken with $n$-hexadecane superphase and an aqueous sodium metatungstate subphase
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Conclusions

• Tiles must bind reversibly
• Associations must be cooperative
• WC\textsubscript{s} can be used to enforce matching rules for a simple computation
• WC\textsubscript{s} made binding of tiles cooperative