

Creating 3D object with DNA or How we use Cahnano to design a 2D spade and the importance of staple placement in the stability of the final shape

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Introduction

- Connexion A - T and G - C
- Scaffold
- Staples

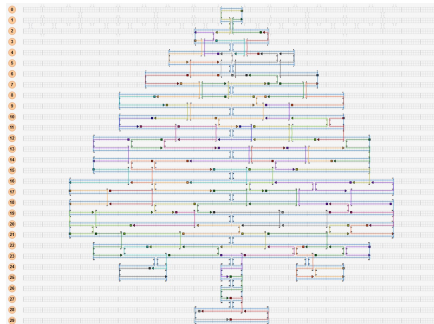


Figure: Spade created on Cadnano

And... in detail ?

- How do you turn ?
 - Scaffold : virus
 - We know where it can turn

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And... in detail ?

- How do you turn ?
 - Scaffold : virus
 - We know where it can turn
- But how to be sure ?
 - Position staples \rightarrow Force the turn

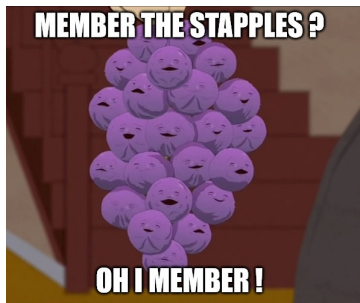


Figure: Memberberries

What we did

- We like cards so...

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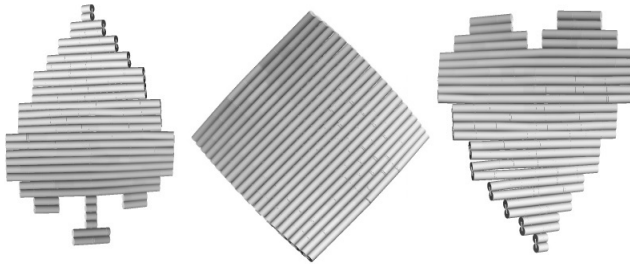


Figure: Model results with Cando

Our conclusion

- The stability
- Heat map of the fluctuation

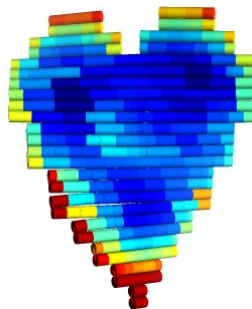


Figure: Heat map

- Video comparative

Conclusion

- Scaffold : Hamiltonian path
- Link with staples
- Staples at random for more efficiency

Conclusion

- Scaffold : Hamiltonian path
- Link with staples
- Staples at random for more efficiency
- And now you can play poker at a molecular level !
- Any questions ?