## Micromagnetic simulation of magnetization reversal in a discrete magnetic nano-block chain

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Magnetic recording media with higher storage density may require patterned magnetic elements. It has been known that the elements have single-domain state as their dimensions decrease down to nanoscale. For arrayed elements with specific structure such as a chain, a further collective feature of the arrayed elements is observed due to the magnetostatic interaction among magnetic elements, which possibly allows a logic operation[1-2]. In this work, micromagnetic simulations have been performed to investigate magnetization reversal mechanism in a discrete magnetic nano-block chain, where each element shape has been varied to be square, circular, and elliptical. Particularly, the nano-block chain with square elements is found to exhibit a shape anisotropy, with easy axes along the diagonals of square, which makes the reversal behaviour significantly different from the reversal in the nano-chains made of circular or elliptical elements.

## References

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