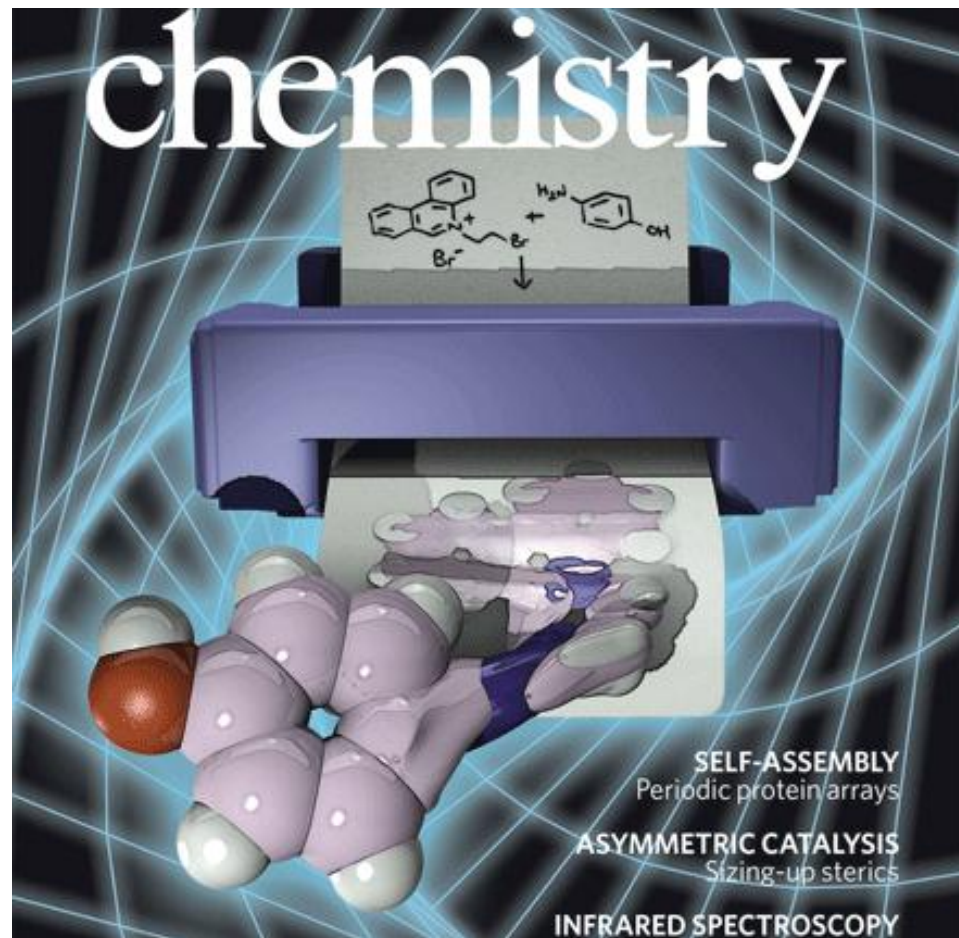
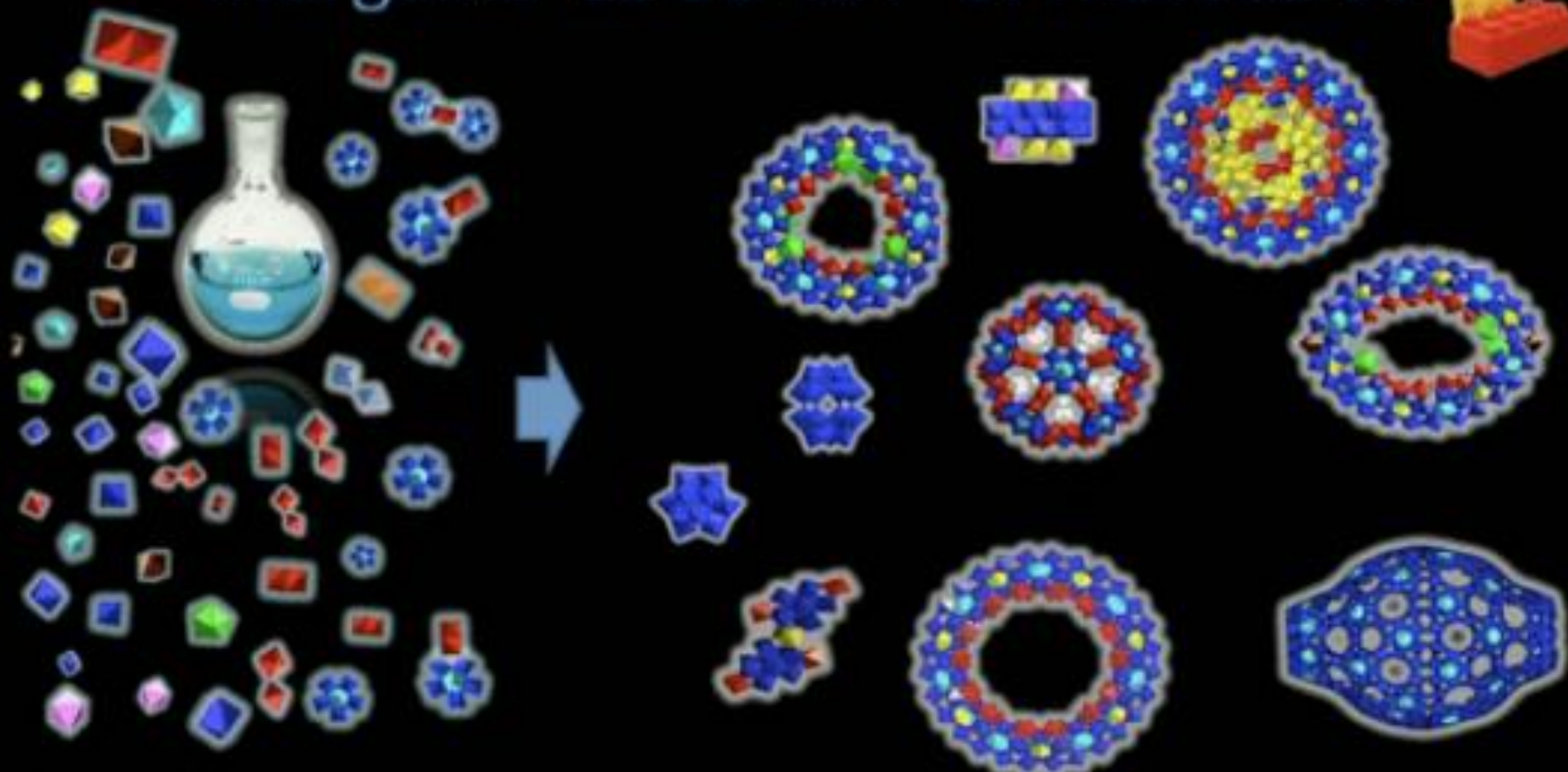


Quantum Technologies for on Demand Molecule Printing (Quan-Te-Print)

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Inorganic 'LEGO-KIT' of Molecules



Quantum Technologies for Molecules

- Exploration of multiple states / vast parameter space for evolvable systems
- Quantum reaction network dynamics
- Engineering new devices for quantum synthesis
- Quantum control of molecules using photons
- To move from 'discovery' to evolution of desired properties (from a specification → to fitness)
- Embodied optimisation algorithm using coupled quantum-classical device
- Selection of new drug candidates using 'quantum' or 'virtual' screening.
- Software control of matter via quantum superposition
- Quantum-based 'chemical' search engine

Impact

- A whole new way of discovering materials and molecules
- Modular systems for quantum computational processing
- Quantum annealing for 'systems-programming' in materials and molecules
- Parallel computations using molecular encoding
- A completely new technology will result requiring a new cohort of researchers with new skills
- New scientific problems requiring, optical physics integrated chemistry, engineering, computation, systems control are required
- Quantum search engines will define a new area of science and technology rather soon
- Discovery of new drugs, processes, and concepts

