Getting Nature to do the Work

One of the major stumbling blocks in nanotechnology devices, as opposed to materials, is how to interface with the macroscale world. Nature cracked this problem a long time ago, and now researchers at Purdue University are attempting to understand if we can use the same trick.

There’s no little robots here, no nanoscale assemblers, just one of the basic building blocks of life, ribonucleic acid (RNA). While the work is still at an early stage, it is part of a growing body of work harnessing natures pre existing nanomachines for different purposes to the one for which they evolved, something humanity has successfully done with organisms ranging from yeast to dogs.

“Living systems contain a wide variety of nanomachines and ordered structures, including motors, pumps and valves. Our research is devoted to making these machines function outside their native environment.” – Peixuan Guo, Purdue University.