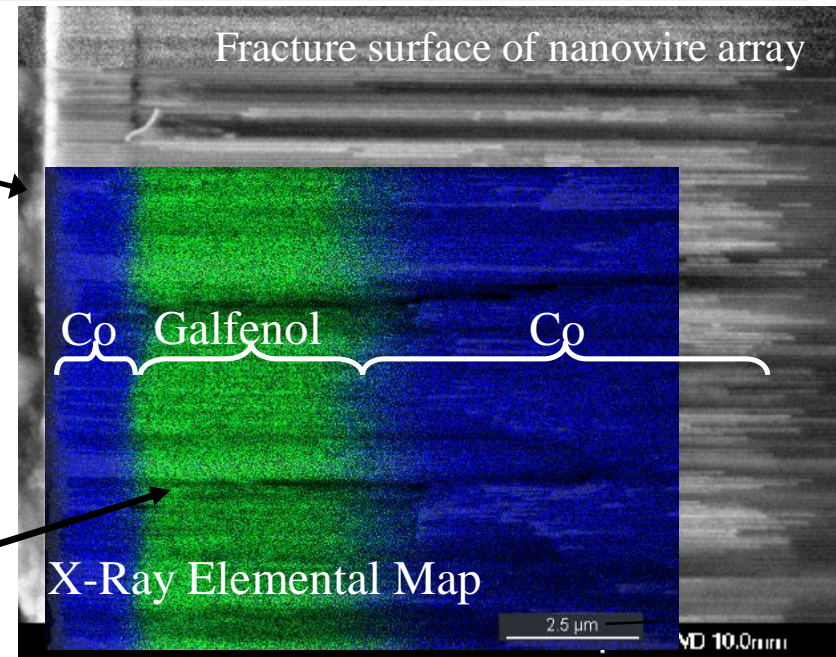
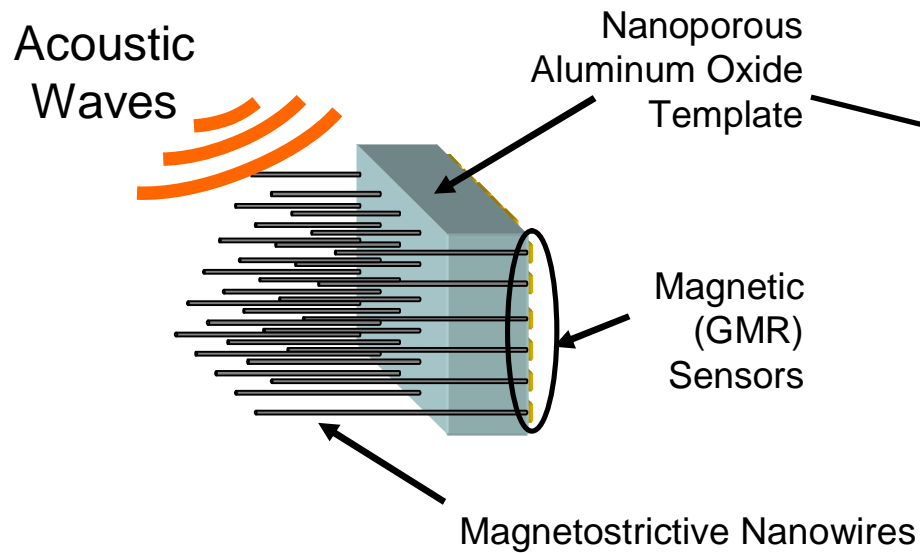


Artificial Cilia Transducers (ACTs)

Patrick McGary and Bethanie J. H. Stadler (PI)

Electrical and Computer Engineering, University of Minnesota



- The project goal is a device that uses magnetostrictive nanowire arrays to detect acoustic waves.
- When these nanowires resonate, they will generate local magnetic fields, which can then be transduced to electrical signals by GMR sensors (similar to hard drive heads).

- Charge controlled deposition allows engineering of heterostructured nanowires.
- Multi-segmented nanowires provide internal magnetic bias to the Galfenol via Co.
- Nano-acoustic testing apparatus is being developed.