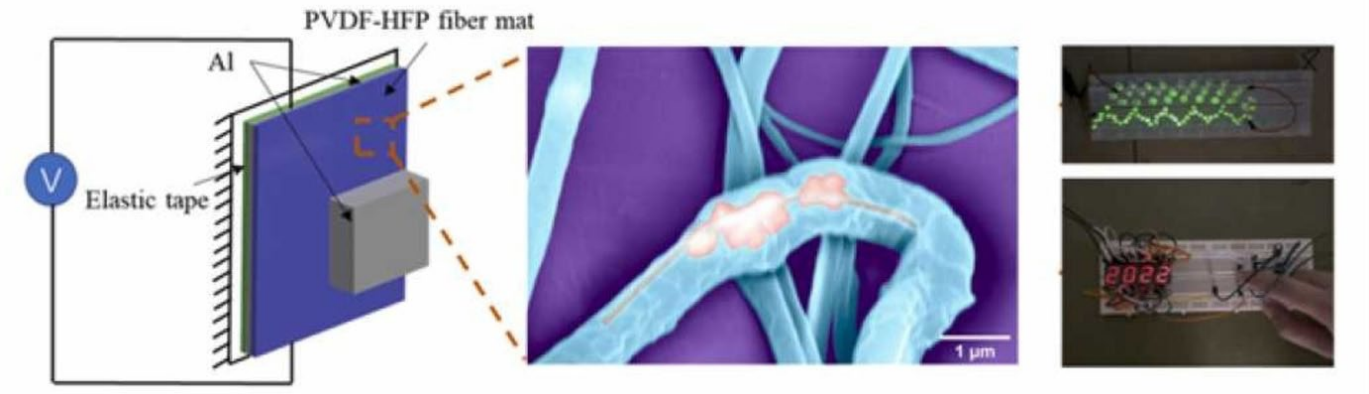
PhD Scholarship on High Performance and Evaporative Energy Harvesting Nanogenerators

Wearable electronics are currently widely used for healthcare, intelligent sport, security and entertainment. Battery-driven sensors have several drawbacks: limited lifespan, high replacement cost, and environmental pollution. Devices also need to be comfortable and resistant to sweat and environmental humidity. This project aims to develop next-generation, battery-free, 'smart' eco-friendly textiles with in-built sensors that are more efficient, comfortable, and hard-wearing than predecessors. Licensing of IP and established collaborations with industry partners will enable the design and manufacture of industry-leading, flexible and breathable self-powered sensing systems, with a wide range of applications in health monitoring, athlete training, heavy-load monitoring, virtual reality, smart home and entertainment. This will increase our national competitiveness in advanced manufacturing, and enable Australia to play a leading role in the global wearable electronics market, estimated to reach over US$459 billion by 2030.



Y He, H Wang, Z Sha, C Boyer, C.H. Wang, J Zhang. Nano Energy, Volume 98, July 2022, 107343

If you would like to know more about this project, please feel free to contact:

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