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Nouf graduated from the University of Leeds in 2017 with a BSc in Nanotechnology. During her final year, she investigated microfluidic flow simulated using COMSOL and ANSYS Fluent. In 2016, she visited the University of Alberta in Canada to undertake a 12-week summer internship under the supervision of Prof. Michael Serpe. In Canada, she investigated synthesis routes for gold and copper fluorescent nanoclusters and their sensing properties. She is currently trying to gain as much skills and knowledge as possible.

"Scribe-on: writing wearable, flexible, and stretchable electronics"

Conductive polymers can potentially provide flexible and lightweight semiconductors that can enable their usage in wearable electronics. Polymer-based materials are highly desirable due to their easy processing methods, lightweight, high strength to weight ratio, and mechanical flexibility. Conductive polyaniline (PANI) nanofibers were successfully synthesised in a polymerisation process where aniline monomer and an initiator, ammonium peroxydisulfate, dissolved in 1.0 M camphorsulfonic acid, were rapidly mixed. The resulting solution was allowed to polymerise unagitated overnight before being dialysed until a pH of ~3.0 was reached. The dialysed polyaniline was then centrifuged once to ensure removal of unreacted material and by-products. Two thin film production methods were investigated: drop cast and dip coating. Optimising the parameters that affect the production of such PANI nanofiber thin film revealed a promising route to controlled film thicknesses and orientation. Therefore, a chemical vapour deposition reactor is being built to allow uniform thin film production on various substrates. Successful completion of thin film production of PANI nanofibers will allow research into laser writing and testing simple proof-of-principle flexible sensor devices. This will allow the development of a direct patterning method of producing high-resolution features, that is both simple and inexpensive, useful in the fabrication of polymer printed devices and soft robotics.