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The Directed Assembly of Conducting Polymer Nanowires[1] BRET FLANDERS, PREM THAPA, Oklahoma State University, RAY BAUGHMAN, NORMAN BARISCI, University of Texas at Dallas — The Directed Electrochemical Nanowire Assembly (DENA) technique is a single-step approach to fabricating metallic nanowires and interconnecting them with external circuitry or other objects. Here we expand this technique to include the growth of non-metallic wires. From aqueous pyrrole solutions, individual wires were grown from the tip of one electrode across a 30 μm electrode gap and into contact with the tip of the other electrode. Energy dispersive spectroscopy is used to show that the wires are composed of doped polypyrrole. The conductance of these nanowires will be discussed, as well as the interfacing of DENA nanowires with biological cells for cell stimulation studies.

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