

ADVANCED FUNCTIONAL MATERIALS

THIN FILMS

In article number 1806002, Rebecca L. Peterson and Youngbae Son report a simple process for simultaneous fabrication of thin film diodes and transistors using selective-area reactions. In some regions, thermodynamically-driven redox and diffusion of a molybdenum film during oxide semiconductor deposition forms a rectifying contact, whereas in areas without exposed metal, oxide transistors are made. RF wireless energy harvesting circuits are demonstrated. This work opens the door for future low-cost, multi-functional thin film electronics.

