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Direct self-catalytic lateral grown NiSi nanowire bridge and their electrical transport¹ YUN-HI LEE, HYUK-SANG KWON*, National Research Laboratory, Nano Device Physics Lab, Department of Physics, Korea University, Seoul, Korea — In order to fabricate NiSi nano-interconnector between electrodes, we introduced self-catalytic direct-lateral growth method. For the growth of NiSi nanowires, Ni/p- or n-type Si bilayer was formed on the thermal oxide coated Si substrate. Then, the layered films were treated in chemical vapour deposition reactor under the flowing of Ar at 900-1500 K. The lateral grown NiSi nanowire bridge showed a high current carrying capacity of 3-10 mA per μm at 10 mV of bias voltage. The method introduced in this work suggests that it may be possible to provide building block in nano-electro-spinics.

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