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Getter Sputtering System for High Throughput Fabrication of Composition Spreads[1] JOHN GREGOIRE, ROBERT BRUCE VANDOVER, JING JIN, FRANK DISALVO, HECTOR ABRUNA, Cornell University — We describe a sputtering system that can deposit composition spreads in an effectively UHV environment but which does not require the high-throughput paradigm to be compromised by a long pumpdown each time a target is changed. The system deploys four magnetron sputter guns in a cryoshroud (getter sputtering) which allows elements such as Ti and Zr to be deposited with minimal contamination by oxygen or other reactive background gasses. The system also depends on custom substrate heaters to give rapid heating and cooldown. The effectiveness of the gettering technique is evaluated, and example results obtained for catalytic activity of a pseudoternary composition spread are presented.

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