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#### Sources

Arima, T. (2008). Correlated oxides: Sliding electrons take charge. *Nature Materials*, (7), 12-13.

Brockman, J. S., Gao, L., Hughes, B., Rettner, C. T., Samant, M. G., Roche, K. P., & Parkin, S.

P. (2014). Subnanosecond incubation times for electric-field-induced metallization of a correlated electron oxide. *Nature Nanotechnology*, 9(6), 453-458.

doi:10.1038/nnano.2014.71

Dax, M. (1997). The non-volatile memory challenge. *Semiconductor International*, 20(10), 84.

Ding, K., Aeberhard, U., Lambertz, A., Smirnov, V., Holländer, B., Finger, F., & Rau, U. (2013).

Impact of doped microcrystalline silicon oxide layers on crystalline silicon surface passivation. *Canadian Journal of Physics*, 92, 758-762. (2013). Retrieved October 2, 2014, from NRC Research Press.

Martin, D., Schröder, U., Yurchuk, E., Mikolajick, T., Trentzsch, M., Bentum, R., ... Müller, S.

(2013). Downscaling ferroelectric field effect transistors by using ferroelectric Si-doped HfO<sub>2</sub>. *Solid-State Electronics*, 88, 65-68. (2013). Retrieved October 2, 2014, from Elsevier.

Min Hyuk, P., Yu Jin, K., Woojin, J., Taehwan, M., & Chel Seong, H. (2014). Ferroelectric

properties and switching endurance of Hf<sub>0.5</sub>Zr<sub>0.5</sub>O<sub>2</sub> films on TiN bottom and TiN or RuO<sub>2</sub> top electrodes. *Physica Status Solidi (RRL) – Rapid Research Letters*, 8(6). (2014). Retrieved October 16, 2014, from WILEY-VCH Verlag.

Ngai, J., Walker, F., & Ahn, C. (2014). Correlated Oxide Physics and Electronics. *Annual*

*Reviews*, 44, 1-17. (2014). Retrieved October 2, 2014, from The Annual Review of

Materials Research.

Stolichnov, S W E Riester, E Mikheev, N Setter, A W Rushforth, K W Edmonds, R P Campion, C T Foxon, B L Gallagher, T Jungwirth, H J Trodahl (2011). Ferroelectric polymer gates for non-volatile field effect control of ferromagnetism in (Ga, Mn)As layers. *Nanotechnology*, 22(25), 254004.

Tokura, Y. (2003). Correlated-Electron Physics in Transition-Metal Oxides. *Physics Today*, 56(7), 50.

Verma, R., Rao, A., & Singh, B. R. (2014). Electrical characterization of the metal ferroelectric oxide semiconductor and metal ferroelectric nitride semiconductor gate stacks for ferroelectric field effect transistors. *Applied Physics Letters*, 104(9), 1-4.  
doi:10.1063/1.4866655

Yurchuk, E., Müller, J., Knebel, S., Sundqvist, J., Graham, A., Melde, T., ... Mikolajick, T. (2013). Impact of layer thickness on the ferroelectric behaviour of silicon doped hafnium oxide thin films. *Thin Solid Films*, 533, 88-92. (2013). Retrieved October 2, 2014, from Elsevier.

#### Image Sources

[http://www.emrl.de/r\\_a\\_3.html](http://www.emrl.de/r_a_3.html)

<http://ygg-it.tripod.com/>

<http://www.int.kit.edu/tunableproperties.php>

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