

## PUBLICATIONS

P. Siddiqua, W. A. Hadi, B. Foutz, M. Shur, and S. O'Leary, chapter in "Handbook of Electronic and Photonic Materials," S. Kasap and P. Capper, Editors, Springer, in press, 2017.

P. Siddiqua, W. A. Hadi, M. S. Shur, and S. K. O'Leary, "Is Zinc Oxide a Potential Material for Future High-Power and High-Frequency Electron Device Applications?," in *Materials Research Society Symposium Proceedings*, 2015, vol. 1805.

P. Siddiqua, W. A. Hadi, M. S. Shur, and S. K. O'Leary, "A 2015 perspective on the nature of the steady-state and transient electron transport within the wurtzite phases of gallium nitride, aluminum nitride, indium nitride, and zinc oxide: a critical and retrospective review," *Journal of Materials Science: Materials in Electronics*, published online May 2015.

W. A. Hadi, P. Siddiqua, and S. K. O'Leary, "Non-parabolicity and inter-valley transitions within zinc-blende indium nitride," *Journal of Materials Science: Materials in Electronics*, vol. 25, no. 12, pp. 5524-5534, 2014.

W. A. Hadi, M. S. Shur, and S. K. O'Leary, "Steady-state and transient electron transport within the wide energy gap compound semiconductors gallium nitride and zinc oxide: An updated and critical review," *Journal of Materials Science: Materials in Electronics*, vol. 25, no. 11, pp. 4675-4713, 2014.

W. A. Hadi, E. Baghani, M. S. Shur, and S. K. O'Leary, "Electron transport within a zinc-oxide-based two-dimensional electron gas: The impact of variations in the electron effective mass," in *Materials Research Society Symposium Proceedings*, 2014, vol. 1674.

W. A. Hadi, M. S. Shur, and S. K. O'Leary, "Steady-state and transient electron transport within wurtzite and zinc-blende indium nitride," *Journal of Applied Physics*, vol. 113, no. 11, pp. 113709-1-6, 2013.

W. A. Hadi, M. S. Shur, and S. K. O'Leary, "The sensitivity of the steady-state and transient electron transport within bulk wurtzite zinc oxide to variations in the crystal temperature, the doping concentration, and the non-parabolicity coefficient," *Journal of Materials Science: Materials in Electronics*, vol. 24, no. 1, pp. 2-12, 2013.

W. A. Hadi, R. Cheekoori, M. S. Shur, and S. K. O'Leary, "Transient electron transport in the III-V compound semiconductors gallium arsenide and gallium nitride," *Journal of Materials Science: Materials in Electronics*, vol. 24, no. 2, pp. 807-813, 2013.

W. A. Hadi, M. S. Shur, and S. K. O'Leary, "On the applicability of a semi-analytical approach to determining the transient electron response of gallium arsenide, gallium nitride and zinc oxide," *Journal of Materials Science: Materials in Electronics*, vol. 24, no. 5, pp. 1624-1634, 2013.

W. A. Hadi, E. Baghani, M. S. Shur, and S. K. O'Leary, "Electron transport within the two-dimensional electron gas formed at a ZnO/ZnMgO heterojunction: Recent progress," in *Materials Research Society Symposium Proceedings*, 2013, vol. 1577.

W. A. Hadi, M. S. Shur, and S. K. O'Leary, "Steady state and transient electron transport within bulk wurtzite zinc oxide and the resultant electron device performance," in *Materials Research Society Symposium Proceedings*, 2013, vol. 1577.

W. A. Hadi, M. S. Shur, and S. K. O'Leary, "The electron transport within bulk wurtzite zinc oxide in response to strong applied electric field pulses," in *Materials Research Society Symposium Proceedings*, 2013, vol. 1577.

P. Siddiqua, W. A. Hadi, A. K. Salhotra, M. S. Shur, and S. K. O'Leary, "Electron transport and electron energy distributions within the wurtzite and zinc-blende phases of indium nitride: Response to the application of a constant and uniform electric field," *Journal of Applied Physics*, vol. 113, no. 11, pp. 113709-1-6, 2013.

W. A. Hadi, M. S. Shur, and S. K. O'Leary, "A transient electron transport analysis of bulk wurtzite zinc oxide," *Journal of Applied Physics*, vol. 112, no. 3, pp. 033720-1-5, 2012.

W. A. Hadi, S. Chowdhury, M. S. Shur, and S. K. O'Leary, "A detailed characterization of the transient electron transport within zinc oxide, gallium nitride, and gallium arsenide," *Journal of Applied Physics*, vol. 112, no. 12, pp. 123722-1-6, 2012.

W. A. Hadi, S. K. O'Leary, M. S. Shur, and L.F. Eastman, "The sensitivity of the steady-state electron transport within bulk wurtzite zinc oxide to variations in the non-parabolicity coefficient," *Solid State Communications*, vol. 151, no. 12, pp. 874-878, 2011.

W. A. Hadi, S. K. O'Leary, M. S. Shur, and L. F. Eastman, "Steady state and transient electron transport in Zinc Oxide: recent progress," in *Materials Research Society Spring Meeting*, San Francisco, CA, 2011, vol. 1327.

J. J. Sanchez-Gasca, D. W. Matthews, and W. A. Hadi, "Small signal stability assessment based on transient events," in *IEEE Power Engineering Society Summer Meeting*, Edmonton, Alberta, 1999, vol. 2, pp. 1292-1296.

## **AWARDS**

Graduate student society award, winter 2013.

A. R. and E .G. Ferriss award, winter 2013.

Fredrick Atkins Graduate award, winter 2013.

Doctoral tuition scholarship, 2008 - 2012.

A. R. and E .G. Ferriss award, winter 2012.