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**Calculations of Landé g-factors in III-V nanowhisker quantum dots** A. DE, Dept. of Physics and Astronomy, University of Iowa, C. E. PRYOR, Dept. of Physics and Astronomy, University of Iowa — We present detailed numerical calculations of Landé g-factors in semiconductor nanowire based quantum dots. We consider 111 oriented InAs nanowires with InP double barriers forming the dot, for which transport properties have recently been investigated[1]. We find that compared to recent calculations of self-assembled InAs/GaAs quantum dots[2], typical nanowire dots have larger, and negative, g-factors. We attribute this to the nanowire dots being larger than self-assembled dots, resulting in less angular momentum quenching. For nanowire sizes typical of those that have been fabricated to date, we find  $g \approx -3$ .

1. M. T. Björk et al., Nano Letters, **4**, 1621 (2004).
2. C. E. Pryor, M. E. Flatte, Phys. Rev. Lett., in press, [www.arxiv.org/abs/cond-mat/0410678](http://www.arxiv.org/abs/cond-mat/0410678)

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