On nanostructured silicon success

Recent Letters by Piggott et al. 1 and Shen et al. 2 claim the smallest ever dielectric wave length and polarization splitters. The associated News & Views article by Aydin3 states that these works "are the first experimental demonstration of on-chip, silicon photonic components based on complex all-dielectric nanophotonic structures." Here, we question the rationale behind the competition for a small device footprint as set out by the authors of the two papers 1,2 and also point out a lack of appropriate historical context in the three contributions 1–3.