Figure 1. Compositional characterization of biomass based feedstocks. The acid insoluble lignin content of various feedstocks (A), acid soluble lignin (B) and acid insoluble glucose (C) as % content per unit dry weight (DW). Each feedstock was examined for calorific value (D) and compared to values for low-grade and high-grade coal. Pairwise comparison of lignin (E) or cellulose (F) with calorific value with corresponding $R^2$ value for the slope of the trendline. Feedstocks examined included high-lignin drupe endocarp tissue (from peach, olive, walnut and coconut), perennial grasses such as switchgrass (P. virgatum), woody biomass feedstocks such as poplar (P. deltoids and P. trichocarpa) and leafy crops such as tobacco (N. benthamiana) and Brassica (Arabidopsis thaliana).