



Figure 1: An example of BasicEntangler ansatz.  $R_y(\theta_i)$  is a rotation gate around the y-axis by an angle  $\theta_i$  applied to the  $i$ -th qubit, where  $i = 1, 2, 3, 4$ . The circuit layer in the dashed box can be repeated  $D$  times to increase the representational capacity of the ansatz.