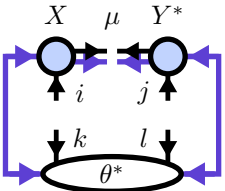


$$\left(\frac{\mathrm{d}S_\mu}{\mathrm{d}U}\right)_{i,j,k,l} =$$


The diagram illustrates a thermodynamic cycle involving two states,  $X$  and  $Y^*$ , and a reservoir  $\theta^*$ . The cycle is represented by a rectangular loop with two blue circular nodes at the top and bottom, and a black oval node at the bottom. The top node is labeled  $X$  and the bottom node is labeled  $Y^*$ . A horizontal double-headed arrow between the two nodes is labeled  $\mu$ . An upward arrow to the top node is labeled  $i$ , and a downward arrow from the bottom node is labeled  $k$ . A downward arrow to the bottom node is labeled  $l$ , and an upward arrow from the top node is labeled  $j$ . Two large blue arrows form a loop: one on the left pointing up and one on the right pointing down. The bottom node is an oval labeled  $\theta^*$ .