

Let U^n be the unit polydisc of \mathbb{C}^n and $\varphi(z) = (\varphi_1(z), \dots, \varphi_n(z))$ a holomorphic self-map of U^n . Let $H(U^n)$ denote the space of all holomorphic functions on U^n , $H^\infty(U^n)$ the space of all bounded holomorphic functions on U^n , and $\mathcal{B}^a(U^n)$, $a > 0$, the a -Bloch space, i.e.,

$$\mathcal{B}^a(U^n) = \left\{ f \in H(U^n) \mid \|f\|_{\mathcal{B}^a} = |f(0)| + \sup_{z \in U^n} \sum_{k=1}^n \left| \frac{\partial f}{\partial z_k}(z) \right| (1 - |z_k|^2)^a < +\infty \right\}.$$

We give a necessary and sufficient condition for the composition operator C_φ induced by φ to be bounded and compact between $H^\infty(U^n)$ and a -Bloch space $\mathcal{B}^a(U^n)$, when $a \geq 1$.