

$$\dot{g} = \frac{c_{01}}{n_0} a_{1,1} a_{1,1}^* g + \frac{c_{02}}{n_0} a_{1,2} a_{1,2}^* g + \frac{c_{03}}{n_0} a_{1,1} a_{1,2}^* g + \frac{c_{04}}{n_0} a_{1,2} a_{1,1}^* g + \frac{1}{\text{Re } n_0} \frac{d_0}{n_0} g^3$$