`GaussianCoulomb[x, y, sigx, sigy]` returns the electromagnetic force $f_x + i f_y$ at the coordinates (x, y), generate with sizes `(sigx,sigy)`=(σ_x, σ_y). Its derivative at the origin is

$$\frac{\partial f_x}{\partial x} = -2\frac{x}{\sigma_x(\sigma_x + \sigma_y)},$$
$$\frac{\partial f_y}{\partial y} = -2\frac{y}{\sigma_y(\sigma_x + \sigma_y)}.$$