

Centre for Metamaterial Research and Innovation



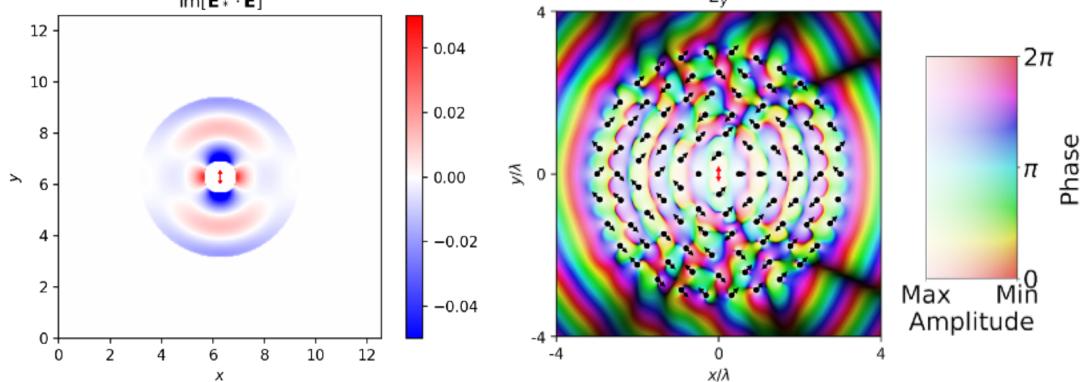


www.metamaterials.center

Continuous → Discrete

$$\delta P = \operatorname{Im} \left[\mathbf{E}_{*}(\mathbf{r}) \cdot \mathbf{E}(\mathbf{r}) \right] \delta \varepsilon \qquad \qquad \delta P = \operatorname{Im} \left\{ \mathbf{p}^{*} \cdot \left[\xi^{2} \overrightarrow{\mathbf{G}}(\mathbf{r}, \mathbf{r}_{n}) \alpha_{E} \nabla \mathbf{E}(\mathbf{r}_{n}) + i \xi \nabla \times \overrightarrow{\mathbf{G}}(\mathbf{r}, \mathbf{r}_{n}) \alpha_{H} \nabla \mathbf{H}(\mathbf{r}_{n}) \right] \right\} \delta \mathbf{r}_{n}$$

$$E_{y}$$







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PSRC Centre for Doctoral Training n Metamaterials



Optimising Power Emission

$$\delta P = \operatorname{Im} \left\{ \mathbf{p}^* \cdot \left[\xi^2 \overrightarrow{\mathbf{G}}(\mathbf{r}', \mathbf{r}_n) \alpha_E \nabla \mathbf{E}(\mathbf{r}_n) + i \xi \nabla \times \overrightarrow{\mathbf{G}}(\mathbf{r}', \mathbf{r}_n) \alpha_H \nabla \mathbf{H}(\mathbf{r}_n) \right] \right\} \delta \mathbf{r}_n$$

