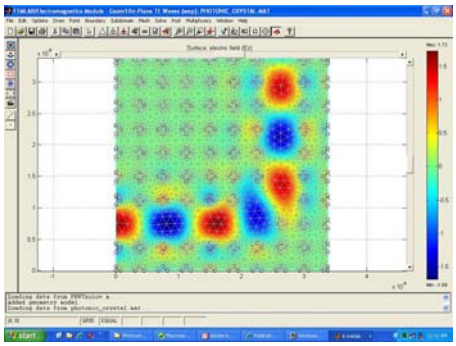
Henghua DENG (Project)

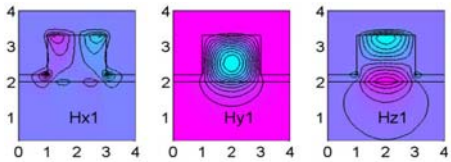


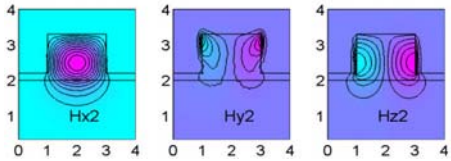
Selected Projects and Applications

Waveguide (FEM programming)



Photonic Crystal (with FEMLAB)

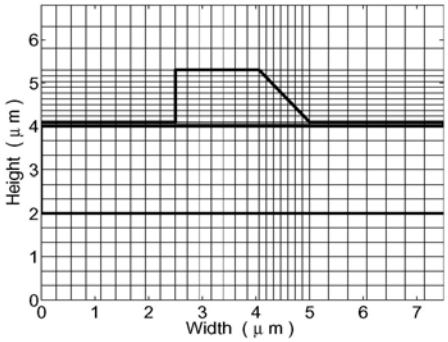




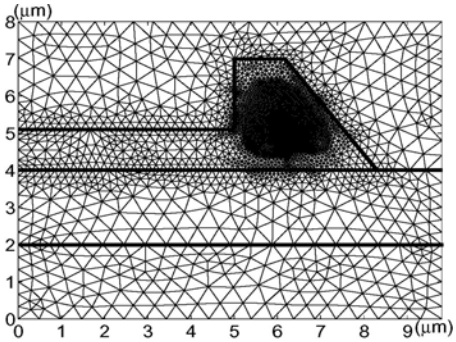
Rib Waveguide (with FEM programming)

TOP

Adaptive Mesh (FEM programming)



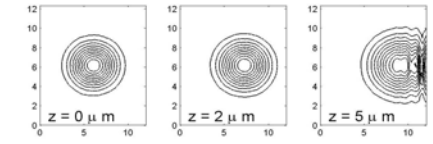
FDM grids (structured mesh)



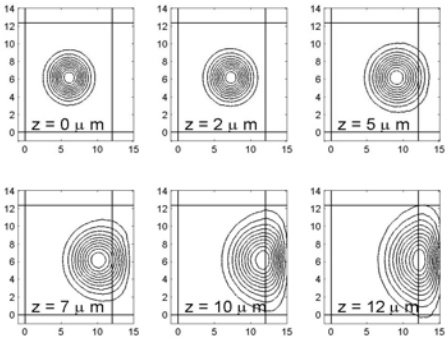
Adaptive FEM mesh (unstructured and adaptive)

TOP

Boundary Condition (with Beam Propagation Method)



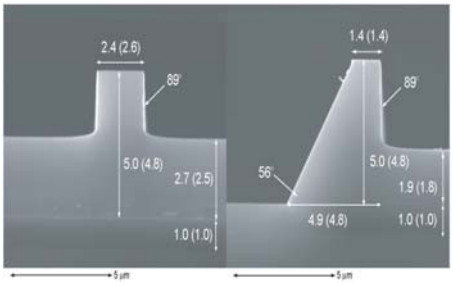
Gaussian Beam Propagation with Neumann Boundary Condition



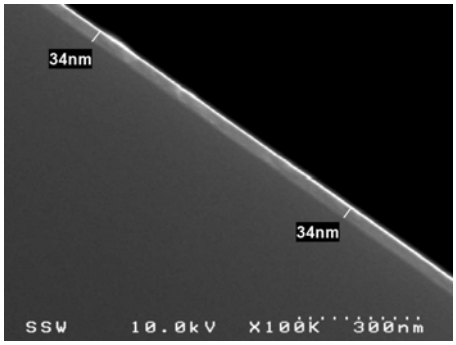
Gaussian Beam Propagation with Perfectly Matched Layer (PML) Boundary Condition

TOP

Fabrication and Integrated Manufacturing



Asymmetric Silicon-on-Insulator Waveguide as Polarization Converter. Dry-etch for vertical wall, and wet-etch for slanted sidewall.

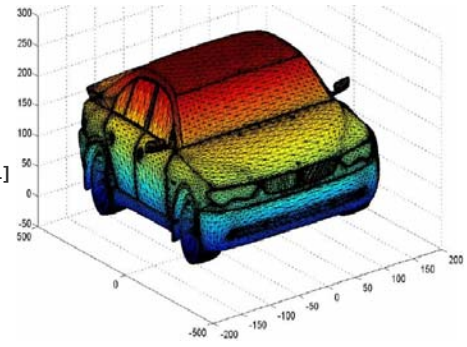


Metal-Dielectric Nanocomposite Fabricated with Pulsed Laser Depostion (PLD)

TOP

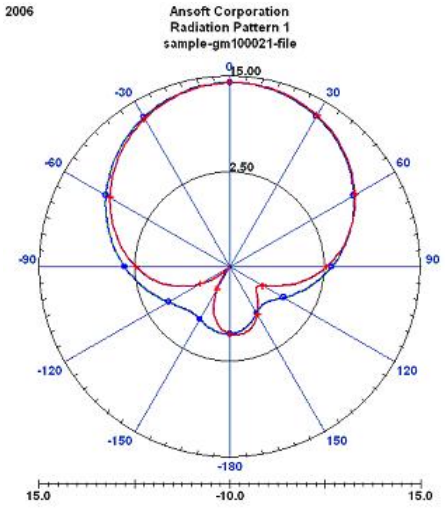
Antenna (with HFSS and FEKO)

[A1]



Car Model (with AutoCAD, Matlab, and HFSS)

[A2]

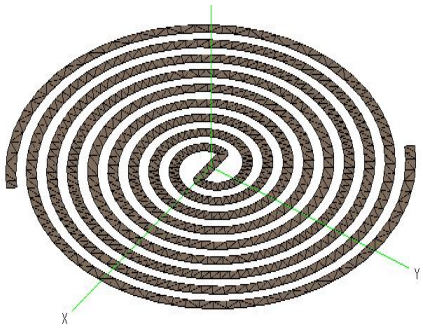


Antenna in a Car (with HFSS)

(1). UWB patch antenna;

(2). dipole antenna.

[A3]



Sprial Antenna for Biomedical Application (with FEKO)

TOP

Software and Research Files

[F1] Research JPEG Pictures (Finite Element Method (FEM), Beam Propagation Method (BPM), Perfectly Matched Layer (PML), Adaptive Mesh, etc.)

[F2] MORE FILES COMING SOON. DOWNLOAD

TOP

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