Introduction

This is the READ ME File For

Data set: Efficient scattering model of multi-layer systems with anisotropic films

Data set DOI: 10.5258/SOTON/D1779

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This data set supports the publication:

J.R. Gill, E. Perivolari, M. Kaczmarek and G. D'Alessandro
Efficient scattering model of multi-layer systems with anisotropic films
J. Opt. Soc. Am. A (2021)
DOI: 10.1364/JOSAA.416265

Iterated Ray Method - Matlab codes

This folder contains the codes to plot:

1) the figure that compare the Iterated Ray Method output to the S-matrix output for an isotropic (figure 4);
2) The reflection and transmission curves for a single anisotropic layer sandwiched between isotropic layers (figure 5).

All the codes contain comments, but these are not meant to be all encompassing and necessarily clear. See below for the licensing terms.

If you use this code you are requested to reference this paper:

J.R. Gill, E. Perivolari, M. Kaczmarek and G. D'Alessandro
Efficient scattering model of multi-layer systems with anisotropic films
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Isotropic case (figure 4)

The code to run is **Plot_Fig4.m**. This produces two pdf files, SvsRayMultiLayer.pdf and SvsRayMultiLayerPhase.pdf, that are included in the paper as figure 4.

Anisotropic case (figure 5)

The code to run is **Plot_Fig5.m**. This produces a figure with the reflectance and transmittance computed using the Iterated Ray Method and printed in Figure 5. The figure in the paper contains also the output of a Comsol code. This is not available from here.

Licensing and other info

Date the code was written: 2020

Date that this file was created: March 2021