

sci.optics: Re: metal optics – an ununderstood chapter in optics becomes understandable

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**From:** Alpha Omega (*who\_at\_where*)

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"josefmatz" <josefmatz@arcor.de> wrote

- > *Everybody has concerned with formulas having a complex index of refraction.*
- > *One of the best proven theories is the incident wave on a homogeneous bulk*
- > *metal. Intensity and polarization of the reflected wave – everything in well*
- > *agreement with the theory. But what is with the energy fluxes within*
- > *the bulk metal ? The books stop here. You get no answer or only qualitative*
- > *answers in the books.*

Amazing

- > *No serious book in electrodynamics gives those formulas. All give references*
- > *to very old literature. And*
- > *also published new articles at top institutes just may write some formulas*
- > *for the electric field very old stuff.*
- > *Many theory professors doubt on this theory !*

Get yourself a few good books e.g. Jackson Electro-Dynamics, Born & Wolf Principles of Optics etc.

If you are really curious study the multivolume Handbuch der Physik the old and new editions.

These can be found in a good university library, maybe not the old edition in Germany as many such libraries there have been incinerated during WW II.

The references are old because such matters have dealt with a long time ago.

As to the professors who doubt the classical theory... Never mind.

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Hope my suggestions will help you, particularly the first two sentences.

Please heed my advice as this is the only one you will get from me since you just graduated to my kill file.

Congratulations and Good Luck.