Re: Microwave absorbing materials?

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- *From*: Uncle Al <UncleAl0@xxxxxxxxxxxx>
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Bruce Sinclair wrote:

> In article <131nc3073d8bad8@xxxxxxxxxxxxxxxxx>, Marvin <physchem@xxxxxxxxxx> wrote:
>
> > Roman King wrote:
> >
> > > I have been using a microwave oven to treat solid plastics. For that
> > > purpose, I place a small glass beaker filled with water to absorb excess
> > > microwave. The problem is that I must add water everytime I use the
> > > microwave oven,which becomes an inconvenient chores. I am wondering
> > > whether anybody could suggest other inexpensive and commonly available
> > > microwave absorbing materials which does not much evaporate as water.
> > > Roman
> >
> > Anything that absorbed microwaves would get hot. Water uses a lot of the energy as heat of vaporization, and it won't get hotter than 100C. And it is cheap. Plus, microwave ovens intentionally use a wavelength that is absorbed strongly by water.
>
> .. or to be a little more accurate, the O−H bond :)

In point of fact a microwave oven is specifically tuned *away* from absorption lines into overall lossiness. If it were in resonance with an absorption it would have no useful penetration depth.

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Uncle Al

http://www.mazepath.com/uncleal/
(Toxic URL! Unsafe for children and most mammals)
http://www.mazepath.com/uncleal/lajos.htm#a2
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