

Re: Help: What material has ESR signal?

Source: <http://sci.tech-archive.net/Archive/sci.physics/2004-10/2217.html>

From: Steve Harris sbharris_at_ROMAN9.netcom.com (sbharris_at_ix.netcom.com)

Date: 10/08/04

Date: 7 Oct 2004 17:54:32 -0700

Uncle Al <UncleAl0@hate.spam.net> wrote in message news:<41658AB5.86B4C82B@hate.spam.net>...

> *Jim wrote:*

>>

>> *Uncle Al <UncleAl0@hate.spam.net> wrote in message news:<4162D195.9A42B76E@hate.spam.net>...*

>>> *Jim wrote:*

>>>>

>>>> *In another thread*

>>>>

<http://groups.google.com/groups?hl=en&lr=&ie=UTF-8&threadm=78034be6.0409301210.404cbc86%40posting.go>

>>>> *the sources of ESR signal were discussed. However I am not quite sure*

>>>> *of the conclusion, and then move some text there to this new thread to*

>>>> *continue the discussion.*

>>>>

>>>> *Uncle Al <UncleAl0@hate.spam.net> wrote in message news:<413E2969.AFF4C9E8@hate.spam.net>...*

>>>>> *Jim wrote:*

>

> *[snip]*

>

>>>> *Is the presence of unpaired electron the only requirement for*

>>>> *EPR(ESR)? if so, I am really confused as following:*

>>>>

>>>> *The electron configuration of Fe+2 and Fe+3 ions are [Ar]3d44s2 and*

>>>> *[Ar]3d5, having 4 and 5 unpaired electron respectively. Then any*

>>>> *material containing either Fe+2 or Fe+3 should be capable of ESR*

>>>> *detection, including hemoglobin.*

>>>>

>>>> *However I found from this paper [J. Peisach, "HEMOGLOBIN A: AN*

>>>> *ELECTRON PARAMAGNETIC RESONANCE STUDY OF*