# Re: What form of matter will last the longest? (OT)

***Source:*** http://sci.tech−archive.net/Archive/sci.physics/2004−07/6215.html

---

***From:*** Angelo (*patrik56_at_libero.it*)
***Date:*** 07/20/04

Date: 20 Jul 2004 01:17:20 −0700

Uncle Al <UncleAl0@hate.spam.net> wrote in message news:<40FC575F.4DEE8DE4@hate.spam.net>...
*> Angelo wrote:*
*> >*
*> > Uncle Al <UncleAl0@hate.spam.net> wrote in message*
*news:<40FB1755.82E84E8E@hate.spam.net>...*
*> >*
*> > (snip higher levels)*

Thanks alot for your answer!

(snip)

*> > > <http://www.haynesintl.com/C2000alloy/C2000folder.htm>*
*> > > <http://members.rogers.com/acidmanual/materials_metals_c2000.htm>*
*> > > http://www.haynesintl.com/pdf/h2111.pdf>*
*> >*
*> > Yes, I see it hard for an analytical tech, as you say.*
*> > Anyway, from organic or inorganic point of view, it may come to*
*> > mind using superacids, i.e. FSO3H−−SbF5−−SO3 or*
*> > HF−−SbF5, to cite the commonest (not for you Uncle Al, of course).*
*> > Don't you think they could dissolve such a coupon of C−2000 in*
*> > a reasonable time?*
*>*
*> No. Look at how the alloy was designed. Nothing hits it.*

I've seen the first two links you provided but, as far as I can remember
there are no test against superacids, hence my doubt.

*> Acidity by itself doesn't do anything − it's the redox*

Ok, but a (solvatet) H(+) activity increase, also increases oxidizing
power. I think that when Hammet's H_0 goes significantly beyond
the values for the previously cited superacids, well, I begin to
seriously figure out a suitable container :−)

*> potential. You might have some luck with a strongly coordinating*
*> ligand and bubbling air through, maybe adding a catalytic redox*
*> couple like Cu(I,II) or Fe(II,III), but I doubt it.*

Right, I recall these well thought strategies.

> *316SS is physically weak and chemically reactive, but it*

Sorry, don't know about 316SS, nor other species you cite below,
but I trust you, of course.

> *withstands most everything anybody commonly throws at it. Heck,*
> *6061−T6 aluminum is all over the place, and zinc−based pot*
> *metal. They survive. Can you even begin to imagine what*

Sorry again, (I told you about my level of English understanding)
I couldn't catch even a pale clue in the following sentence, after
the question mark, but I don't expect you bother to explain or
rephrase it, of course :−))

> *Hastelloy C−2000 will withstand? It would be a superb grave*
> *marker if you took care of the weight (hollowed, of course) with*
> *a proper footing.*

(snip)

> *Kinda pricey and prone to irreversible reduction.*

You are (obviously) right again, but after my 'BTW' I somewhat
stopped to consider price or other contingent (?) factors.
AuF5 in liquid HF (solubility allowing) may be operated at temps as
low as −84 Celsius, wherein (may be) the irreversible decomposition
could be frozen.

> *PtF6 is another violently powerful electron sucker. Look what it*
> *does to oxygen or xenon.*

I have to apologize: forgotten to say that during and after Ph.D I
worked in between inorganic and organometallic research field
(whereas before organic and ionic gas phase chemistry were the
main fields); so I know what a beast is PtF6 and its not so obvious
chemistry with the species you cite.

Thank you again for your attention,
Angelo

P.S. − All my best wishes for your very well thought Eotvos
experiment !