

Crossing
Boundaries

*for International
(and Interplanetary)*

Peace

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Chicago Calling

Periodic Table Poetry 10/9/14

@ Cup and Spoon

M a n g a n e s e

(#24, Mn)

I wanted plants around.

She always had plants around,
everything thrived with her.

Ever since she died
my home has become a jungle.

Let me have control over this.

Let me add water nearly daily
to the plant I bought when I visited her,
or to the tree she gave me years ago.

Add plant food to the water.
Because I don't want anything to die.

Trim the dried leaves,
because they would remind me
that even nature misses her.

Keep plants near windows,
they need their light.
Their Manganese needs it
for their chlorophyll production.

Actually, their Manganese assimilates
the carbon dioxide in photosynthesis.

So breathe in our carbon dioxide
and give me more
of my precious oxygen,
so we can realize
how we depend on each other so.

Actually, I should stock up
on Manganese plant supplements.

I'll make sure you get everything you need.
I'll make sure nothing happens to you.

U n u n s e p t i u m

(#117, U.S.)

I knew you were out there for years.
But to get you, after toiling in my Dubna lab
we had to ask the Americans
over in Tennessee
if they could send us
some of their wares,

but years passed before I could get
22 milligrams of Berkelium
so I could work in Moscow Oblast
to get you in my sights.

All that time, all I could do
was research, hope.
I'd work, I'd go
and I'd stand on my own,
and I'd leave on my own,*
wondering how long it would take
before I'd see what you might be like.

You see, I used to work at a pharmacy
at Nevsky Prospekt in Leningrad,
that's when I fell in love
with learning about chemicals,
and that is when I wanted
to discover something truly new.

That's when you came into the picture.

Because after years of work,
I still waited for those damn Americans
to come through for us.
I mean, we're scientists,
we're supposed to be on the same side,
this is all about discovery.
And the thing is,
the higher we get in our research,
the more stable we got
on our little island of knowledge.
But this waiting was exasperating —
I got to the point
that I got tired of trying to tell myself
that I had something to discover,
something to share,
that someone wanted to hear.**

Eventually, they had to ship
what I needed to get you
in five packages wrapped in lead;
it flew back and forth
across the Atlantic five times
and was rejected twice by customs.
But once I got what I needed —
oh, you were just about
the heaviest thing I could imagine.
Then again, you've had me
spinning around over the years for you,
so it wouldn't surprise me
if you would do the same for me.

So I'd work while listening to the radio,
and active actions from you
would come to me in short bursts.
But I'll take whatever I can get
in my little corner of the world.
This is research. And this is what I do
to learn what I can from you.

Bohrium

(#107, Bn)

This isn't boring.
You won't be bored with the details —
anyone interested in different kinds of attraction
should listen close. ..

Because Bohrium isn't boring
if you find fusion fascinating.
Think about it for a minute —
what are the conditions
that bring two bodies together
so they join to create something new?

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Think back the the times of year
when you have met people you later dated.
Was it in the summertime,
when the temperature was high,
when you were feeling all hot and bothered
when you saw that special someone
that you were instantly attracted to?
Maybe you were taking a break from school
or going to the beach to relax,
make yourself look just perfect
for that one chance encounter
that will lead to so much more. ..

*(Hate to tell you this,
but that hot weather attraction
is a lot like a hot fusion. ..
Chemically speaking, after atoms are split apart,
“fusion” is the art of getting different parts
to come together to create something new.
The sun's a natural fusion reactor.
Nuclear reactors perform fission to split atoms,
nuclear fusion, or “hot fusion” uses all it's energy*

*to slam those elemental atoms into each other,
so they're more likely to break apart
and their parts can create new elements or isotopes.
(This is how scientists discover synthetic elements.)*

But sometimes, sometimes, that attraction can come
not when the temperature is sizzling hot,
but when things seem bitter cold
and warm bodies have a tendency
to group together to conserve their heat.

I suppose you can say I am “bonded” with someone now,
and when we met on a train commuting from work
it was the middle of January in a cold Chicago winter,
I was fully adorned in a winter coat, a hat,
gloves, a headband for my ears,
boots, a scarf covering my face.
Who knows, maybe that not-so-hot weather
gave us more of a reason to bond,
since it was only three months after we met
that we became engaged for marriage.

*(And I hate to say this, but scientifically
there is a method of fusion for this as well.
Cold fusion is technically the fusion of things
merely at room temperature
and not after nuclear super-excitement.)*

And as I said, I didn't want to bore you with these details,
but there are a lot of ways fusion like that
can even help in the discovery of new elements,
like Bohrium.
Because back in eighty one, element one oh seven
was discovered after bombarding bismuth two of nine
with accelerated nuclei of chromium fifty four.
They only produced five atoms of Bohrium two sixty two,
but man, were they excited. ..
They were *so* attracted to Niels Bohr
that they wanted to *name* their element
nielsbohrium for the Danish physicist.

But wait, Russian scientists originally wanted to name element one of *five* nielsbohrium, so the Germans here at one of seven said hey, we wanted to give props to Neils Bohr for his work in cold fusion (since that was used for the discovery of *this* element). So the Russians relented, but the element naming commission said, wait a minute, we've *never* named an element after the *full name* of *anyone*, so, after they temporarily called it unnilseptium (Uns, Latin for one oh seven), they settled for just the last name and crowned this new gem Bohrium.

And yeah, there are tons of isotopes of Bohrium from all that atom smashing and bonding with half lives from a quarter millisecond to ninety minutes, but there aren't many atoms of the stuff, so all of it's properties are only extrapolated from knowing it's place in the Periodic Table. But still, know how fusing things together is the only way to make this new element, makes you put a whole new spin on bonding, attachment, creating something new, that almost puts a glimmer in your eye and makes you smile again.

Rhenium

(#75, Re)

Okay, so I've been researching
these elements in the Periodic Table,
and when I got to Rhenium
(named for the Rhine river, by the way),
I was kind of stumped.
What comes to your head
when you hear the word "Rhenium"?
Other than the fact that
"Rhenium" was an LP from Parliament
released in nineteen seventy,
I was stumped.

But hey, this element was named after the Rhine river
stretching through Europe,
but in ancient Greek Times,
they thought of the Rhine
as the outermost border
of civilization and reason,
beyond which were mythical creatures.
No lie.

But I don't know if that mythical nature
of the unknown is what drove scientists
to search for this element,
and to learn everything they could
about what was otherwise unknown to them...

I mean, Mendeleev, the "creator"
as we know it of the Periodic Table,
postulated this element's existence,
but it wasn't found in his lifetime...
and it was later predicted
by an English physicist in 1913,
but it *still* hadn't been discovered.

But people in different countries
claimed the discovery
through X-ray analysis,
but after a *ton* of dispute
this elusive element was finally found,
and as all scientists like to think,
this discovery has to mean *something*,
I mean, we have to use this discovery
for *something*, so people
will appreciate our precious work!

Well they found out that Rhenium
(now that airplanes were being used more and more
by both vacationers and business travelers)
can be used with super alloys
to make jet engine parts
(well, I guess that's cool
for the jet-setters out there...)
but, after people figured out
that putting lead in high-performance fuel
might not be good for the environment
(okay, or for people),
they found that Rhenium
could be a catalyst
for making lead-free
high-octane gasoline.

Since we now have means to travel faster and farther
(thanks to Rhenium in part, by the way),
we might not think of the Rhine as the edge of our existence
with anything beyond it being so mysterious.
But when it comes to Rhenium,
it's one of the rarest elements in Earth's crust
(I wonder if that's why it took so long to discover it.)
Because of its radioactivity,
it's used in the treatment of liver cancer
(and maybe pancreatic cancer too),
but with the skyrocketing price of this rare element,
scientists still worry about the potential toxicity of Rhenium.
So, maybe like the mythical creatures
beyond the Rhine the Greeks foretold,
maybe, after discovering Rhenium,
maybe we should be looking
at both the bad — and the good —
that can come out of the rare,
but radical,
and remarkable Rhenium.

Diburnium

(#122, 106)

Spending another Saturday night alone,
I watched an old episode of *Star Trek*.
In this episode, Captain Kirk, McCoy and Sulu
were beamed down to a planet
with no magnetic field.

After the Enterprise
disappeared from their sensors,
Kirk hears Sulu say, “The basic substance
of this planet is an alloy of Diburnium-osmium.”

And my brain stopped
when I heard this elemental scrap.
I wracked my brain, ‘wait a minute,
I know osmium, it’s the densest metal
in the Periodic Table. But Diburnium?’

I know *Star Trek* mentions many elements
and isotopes when they talk science,
hydrogen, it’s isotope deuterium,
transparent aluminum, even dilithium
(which scientists are trying to use now
to boost speed for long distance space travel)...
So I had to research this elusive Diburnium.

Now, the Memory Alpha at *Star Trek* Wiki confirmed that an abandoned Kalandan outpost was built on an artificial planet composed of a Diburnium-osmium alloy. And according to the Starfleet Medical Reference Manual, the element Diburnium had the symbol Db, atomic weight 319, and atomic number 122. Okay, this poet's paying far too much attention to the Periodic Table, but I know that right now 118 is as high as the Table goes, but like a Periodic Table addict I still had to look into science *fiction* that piqued my curiosity. The *Star Trek* Freedom Wiki explained that Diburnium is a metallic element with phaser-resistant qualities. Okay fine, maybe I'll worry about these undiscovered elements only *once* they're discovered, because without actual phasers to worry about in the present, I think I'll stick with the elements we *do* know right now...

G B I O C K

(#119-184)

While researching cold fusion
to learn about my latest periodic table element,
I see a sentence to a link for
“Approaches to element 120 (*Ubn, unbinilium*)”,
and I think,
‘oh no,
this can’t be,
the periodic table only goes to element 118,’
so with dread
I follow the link
and realize
that scientists can’t be happy
with the elements they’ve discovered,
of course not,
so even though there’s no place
in the periodic table
for any new elements. ..

Well, wait a minute,
if they’re talking about element 120,
there has to be talk about element 119,
so I looked it up, and of course, Uue,
ununennium has a wiki web page too,
so I look at their supposed location
in the periodic table,
and they’re off to the left of the table
in two separate additional rows.
119 is in period 8, the s block,
just like its neighbor, 120.

Whatever that means.
(I mean really, haven’t I
done enough research
on these elements already?)

Oh but wait, they're just to the left
of Hydrogen, which is *also* in that s block.

So the periodic table contains four blocks,
the s, p, d and f blocks, giving you
details about the atoms therein.
But then I see a link there
for the "extended periodic table".

Of course. An extended periodic table.

So I look, and because all of these
are super-heavy elements, the theoreticians
(including Seaborg, who theorized about
many of these now postulated elements)
dropped this new set of twelve
121 and up elements
into the "g block."

Yes, the g block.
Ask any prisoner in the g block,
and they'll swear
the prosecution made everything up
to put them behind bars.

I wonder, if all of these elements
are still undiscovered,
how much of these g block elements
are these chemists really making up?

But as far as they can *hypothesize*, this g block
in the periodic table contains eighteen elements
with partially filled g-orbitals in each period. ..

I've read documents postulating
the first g block element's at 121
that claim the hypothesized element
126 would be within an island of stability,
resistant to fission but not to alpha decay.
They've tried to create 119, 120, 121, 124, 126 and 127,
and *some* scientists once claimed
discovering an isotope of 122 occurring naturally. ..

But wait a minute, let me think about this:
if the g block is made of twelve elements,
that would mean the edge of the g block
is element one thirty two, and *still*
I've seen that "extended periodic table"
has Superactinides and Eka-superactinides
listed all the way up to *one hundred eighty four*.

Razzin frazzin.

Mumble grumble.

Can elements even *exist* with that heavy a weight?

Isotopes of some synthetic elements
last only milliseconds, and as far as I know,
the only way these super-heavy synthetic elements
can be created is by smashing an atom
with a ton of neutrons into an atom
of a synthetic element (you know, like one
with a half life of only milliseconds).

Can scientists even be able to *try*
to create these only predicted
super-heavy synthetic elements?

Because it's really unknown
how far the periodic table extends
beyond the discovered element 118.
But some predict that it ends at 128.
Some predict that it ends at 155.

Some first guessed
that the table couldn't go past 137,
then later calculated the end was 173.

Oh, razzin frazzin,
with all these guesses
I can't hear myself a-speechin'. ..
But I'm not quite sure any of these chemists
are sayin' the right answers, either,
when everyone can only guess
if any more elements can even be created.

Okay, fine, I'm just a poet
trying to learn a thing or two,
to refresh my memory
on the periodic table
and keep my science know-how up to par.
Maybe I'll just have to wait
until they *actually* discover
new elements,
and be content
when they discuss elements
in astronomy and science shows,
when I can actually understand
what they're saying and think,
“wait, I think I knew that. ..”

Because okay, I'm only a poet,
but I'll keep my scientific mind open
and welcom every new discovery as it comes
with open arms.

