



eTwinning Project: THE CHEMICAL TREE



eTWINNING PROJECT: THE CHEMICAL TREE

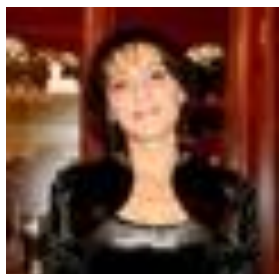




Rita Godoroja

*Liceul de Limbi Moderne si Management, Chişinău,
Republic of Moldova*

Role: Founder



Naira Nahapetyan

*Mrgavan Secondary School, Mrgavan
Armenia*

Role: Founder



Nino Saakashvili

*LEPL Telavi Municipality Village Napareuli
Public School, Village Napareuli Georgia*



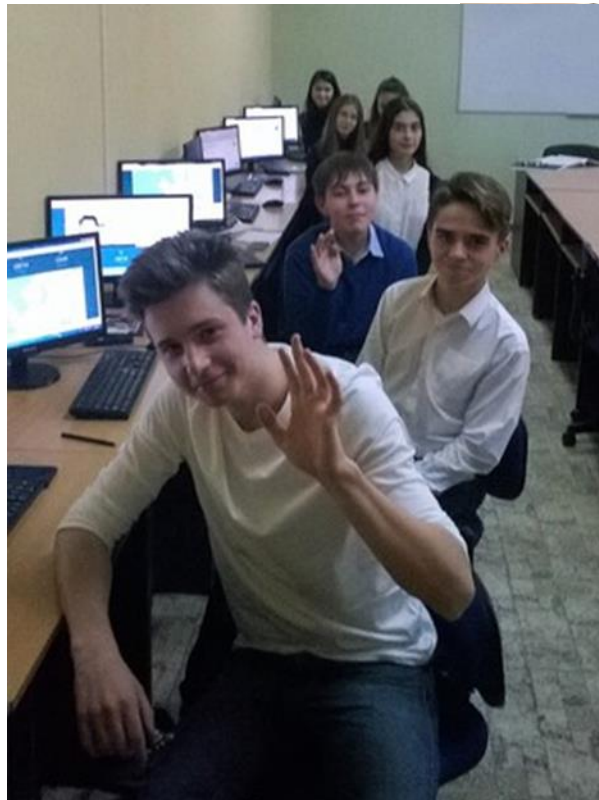
Слађана Ранковић

*OŠ Branko Radičević, Smederevo, Смедерево
/ Smederevo, Serbia*

Lyceum of Modern Languages and Management, Chişinău, Republic of Moldova



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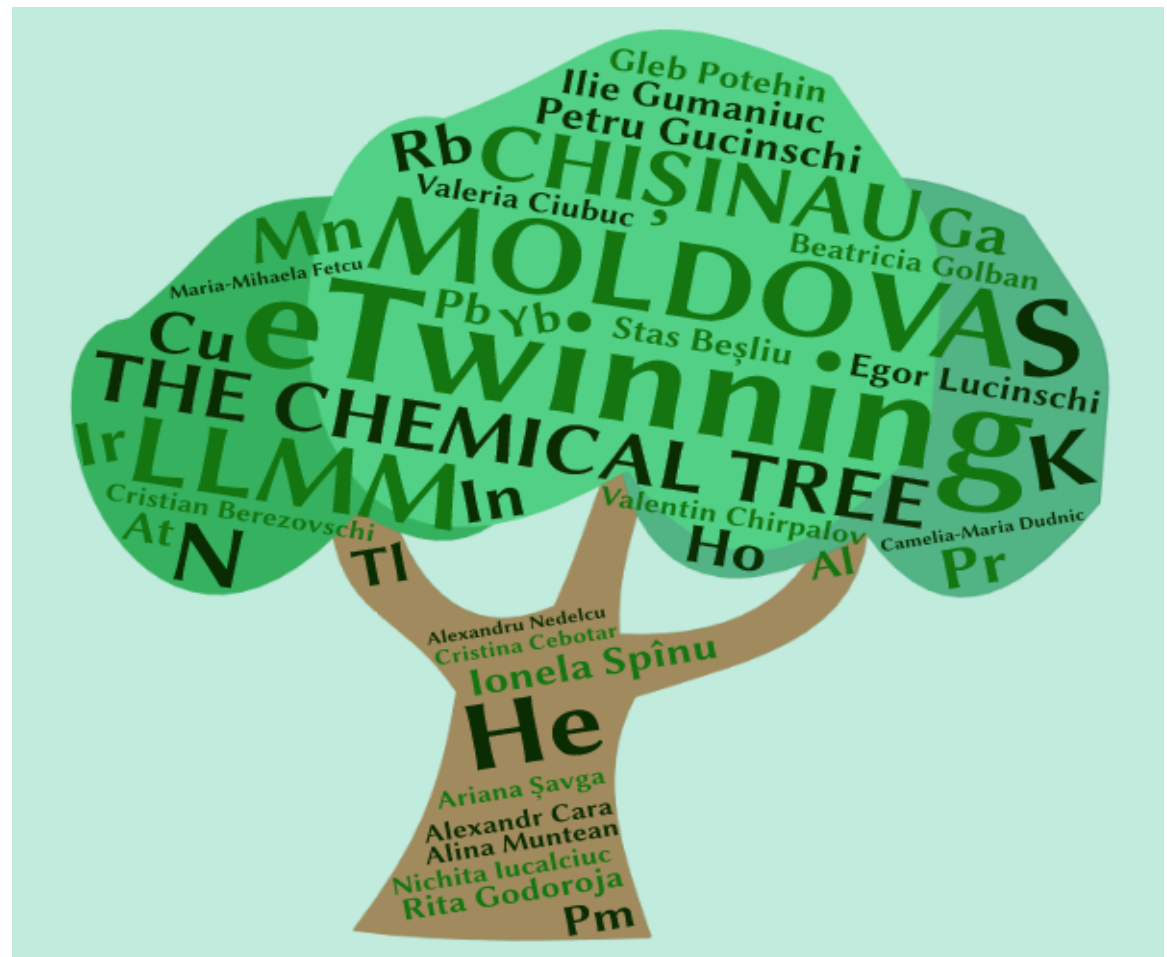
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2	He	Petru Gucinschi
7	N	Ionela Spînu
13	Al	Ilie Gumaniuc
13	Al	Rita Godoroja
16	S	Valentin Chirpalov
19	K	Nichita Iucalciuc
25	Mn	Beatricia Golban
29	Cu	Egor Lucinschi
31	Ga	Alina Muntean
37	Rb	Valeria Ciubuc
49	In	Cristian Berezovschi
59	Pr	Camelia-Maria Dudnic
61	Pm	Gleb Potehin
67	Ho	Alexandru Nedelcu
70	Yb	Alexandr Cara
77	Ir	Ariana Şavga
81	Tl	Maria-Mihaela Fetcu
82	Pb	Cristina Cebotar
85	At	Stas Beşliu

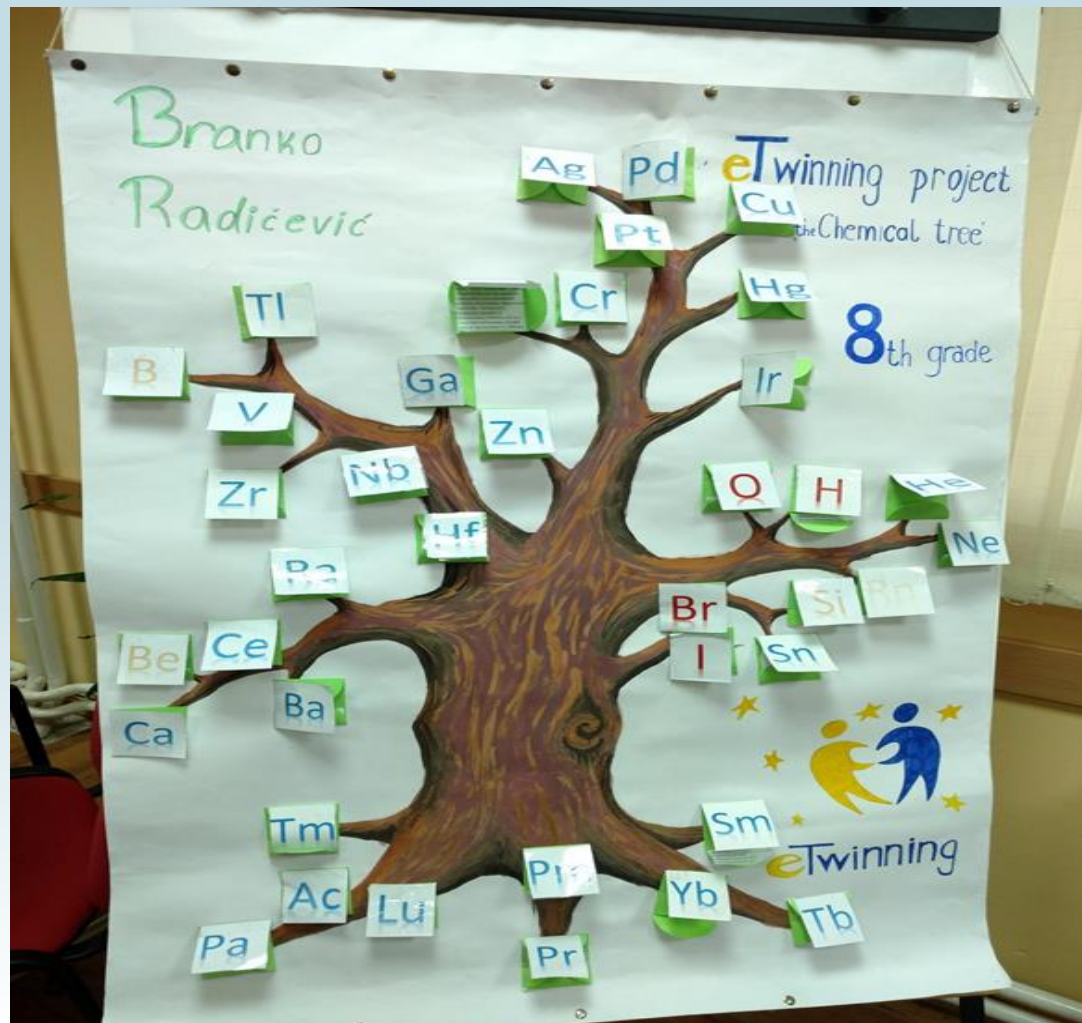




The Chemical tree eTwinning project



Primary school
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Smederevo, Serbia



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2

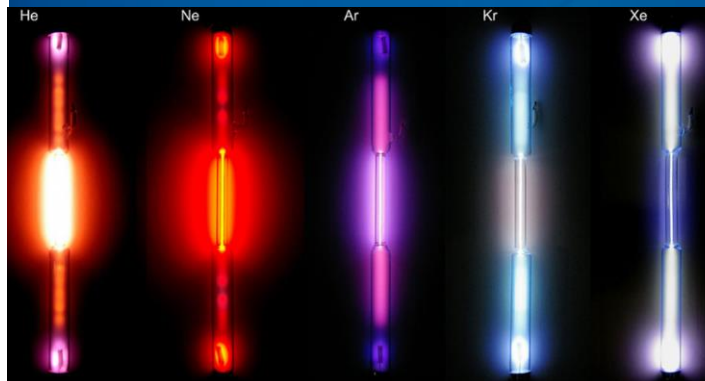
He

Petru Gucinschi

He Helium 2



Balloons



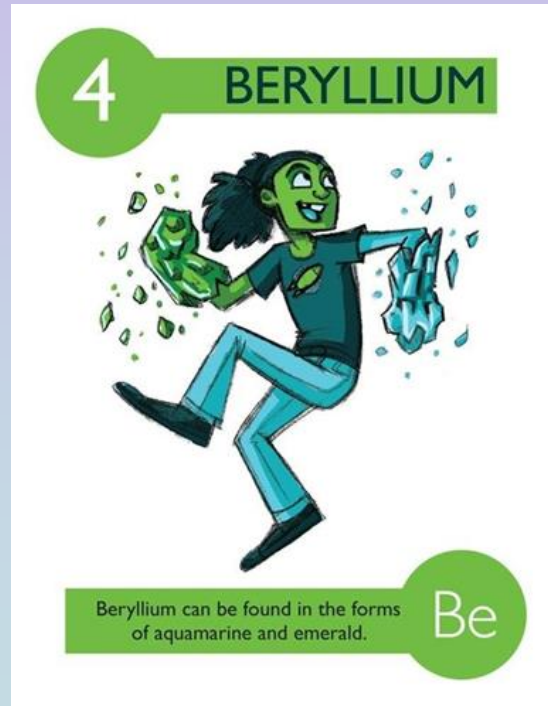
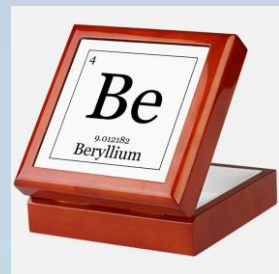
He Helium 2
inert gas, second
lightest element;
nuclear fusion
in sun and stars,
balloons,
lasers,
supercold
refrigerant

Primary school
Branko Radicevic
Smederevo, Serbia



Milena Ristic

The Chemical tree



4 BERYLLIUM

Beryllium can be found in the forms of aquamarine and emerald.

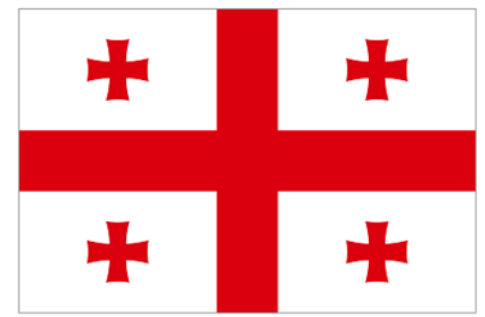
Be



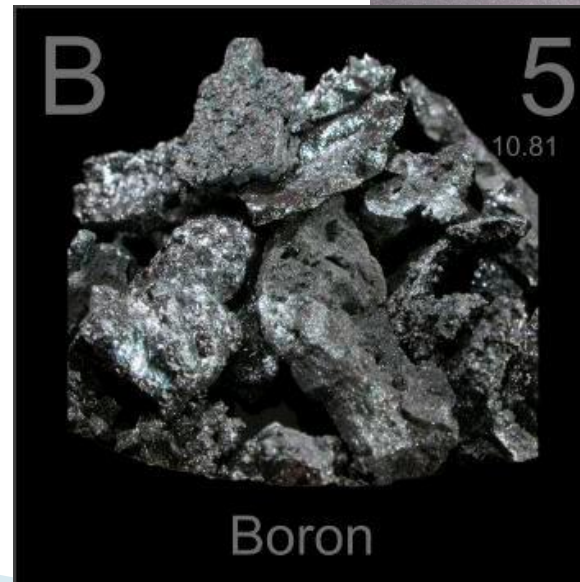
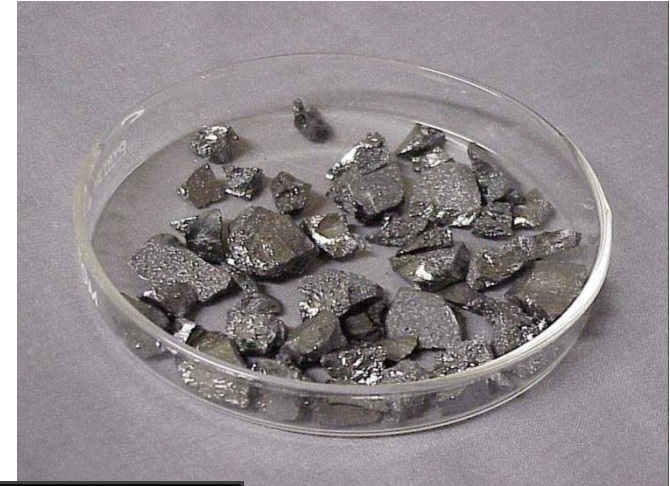


Napareuli public school

eTwinning



Wikaradze Giorgi



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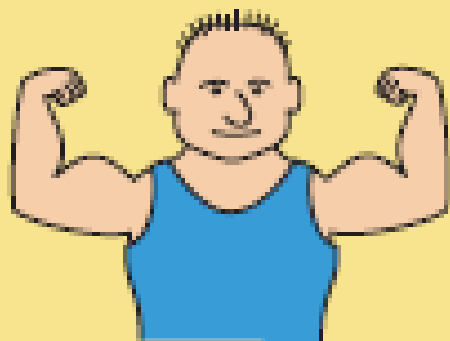
7

N

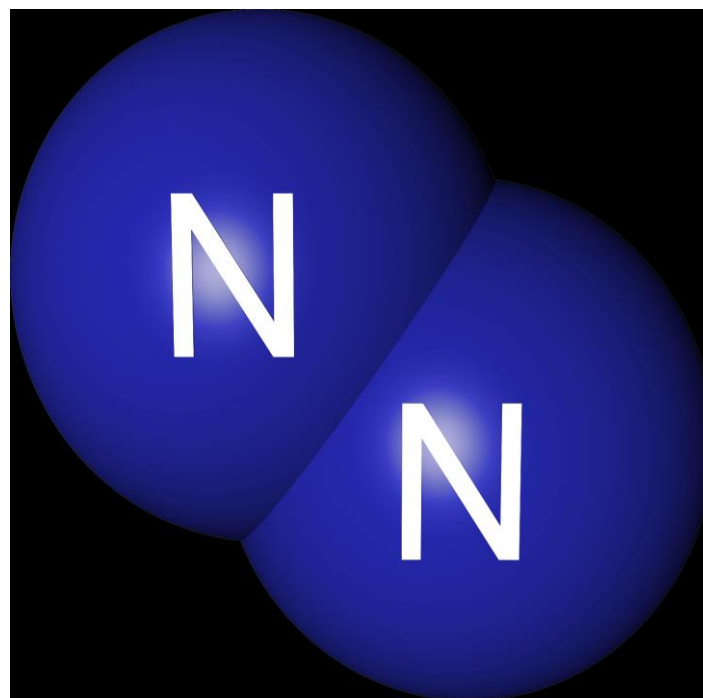
Ionela Spînu

N Nitrogen 7

Nitrogen



Protein



N Nitrogen 7
colorless gas;
78% of air,
organic molecules,
protein, muscles,
DNA, ammonia,
fertilizer,
explosives (TNT),
refrigerants

Mrgavan Secondary School



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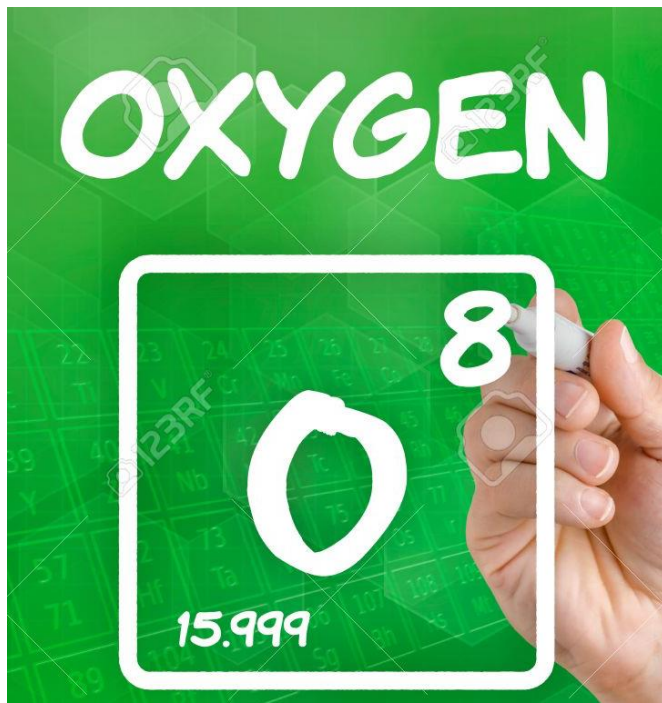
Armenia



Tamara

Mkrtchyan

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Armenia



Tsolak

Hasratyan

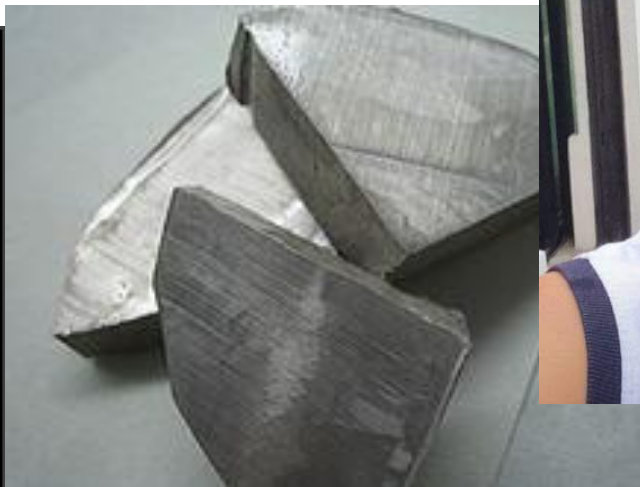
THE CHEMICAL TREE

Na 11

22.990



Sodium



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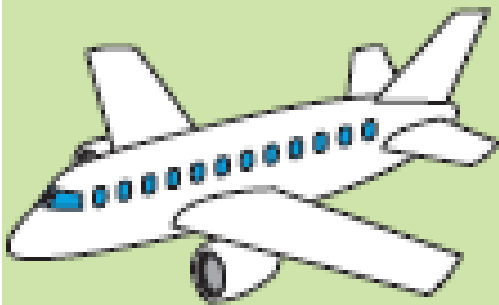
13

Al

Ilie Gumanuc

Al   13

Aluminum



Airplanes



Al Aluminum 13
lightweight non-
corroding metal;
kitchenware, cans,
foil, machinery,
cars, planes, bikes,
feldspar, granite,
clay, ceramics,
corundum, gems

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13

Al

Rita Godoroja



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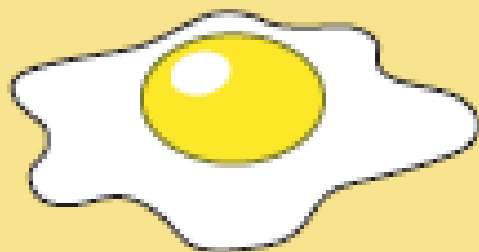
16

S

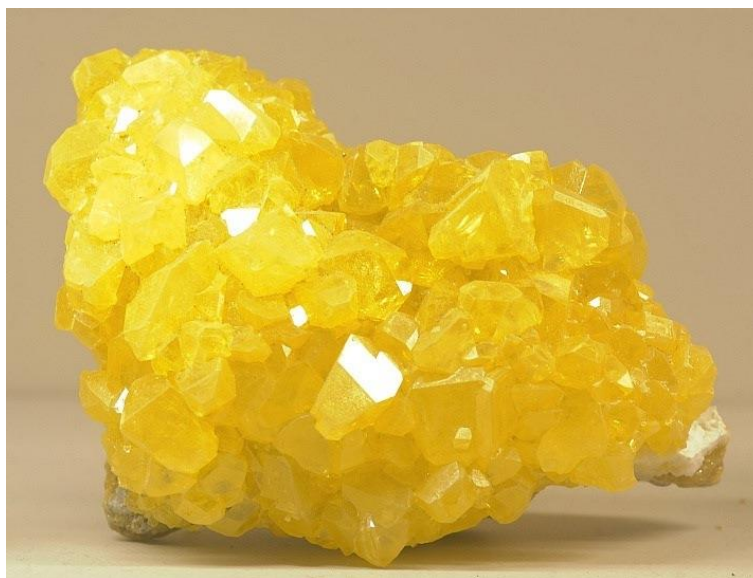
Valentin Chirpalov

S □ ★ 16

Sulfur



Eggs



S Sulfur 16

brittle yellow solid;
skin, hair,
eggs, onions,
garlic, skunks,
hot springs,
volcanos, gypsum,
rubber, acids,
papermaking

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Armenia



Rozalia

Hayrapetyan

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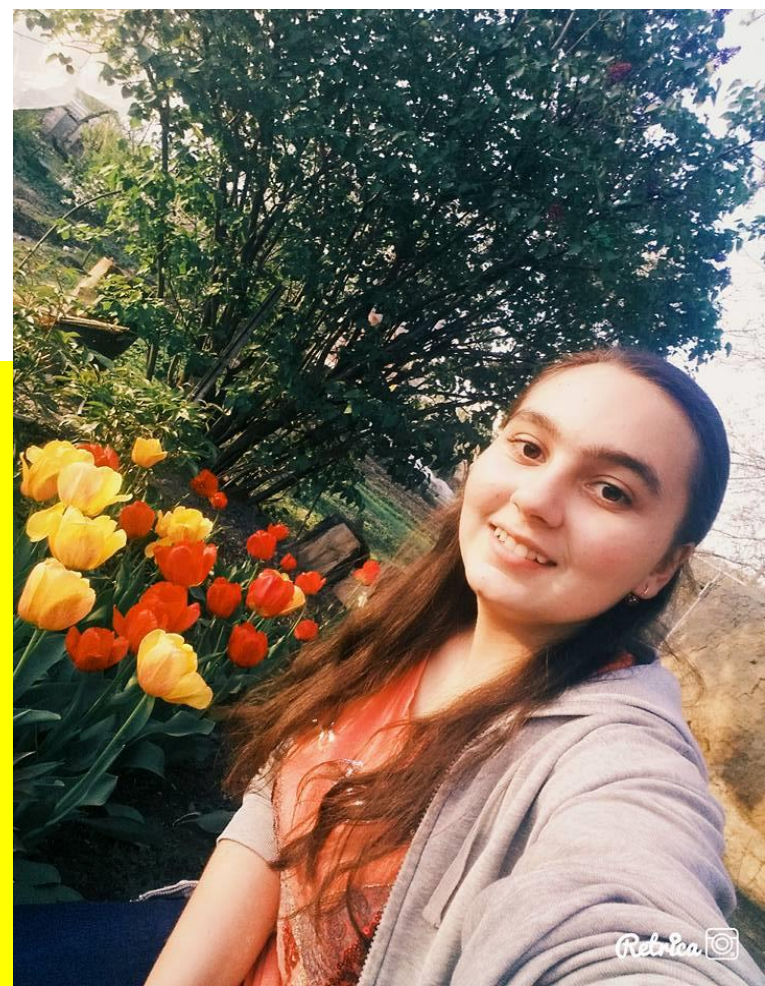


16

S

Sulfur

32.065



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19

K

Nichita Iucalciuc

K    19
Potassium



Fruits and
Vegetables



K Potassium 19
soft metal,
reactive;
salts, nerves,
nutrients in fruits
and vegetables,
soap, fertilizer,
potash, matches,
gunpowder

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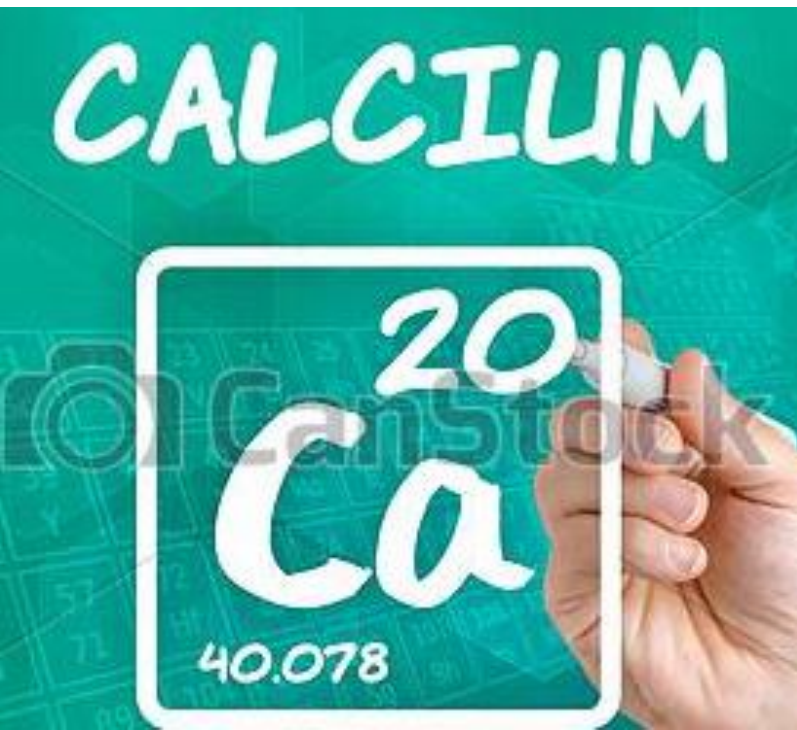
Armenia



Shushan

Saghatelyan

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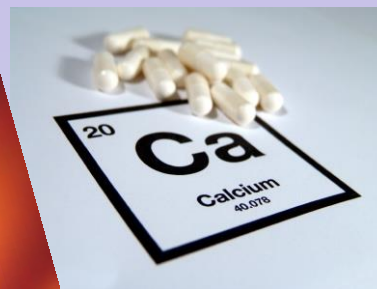
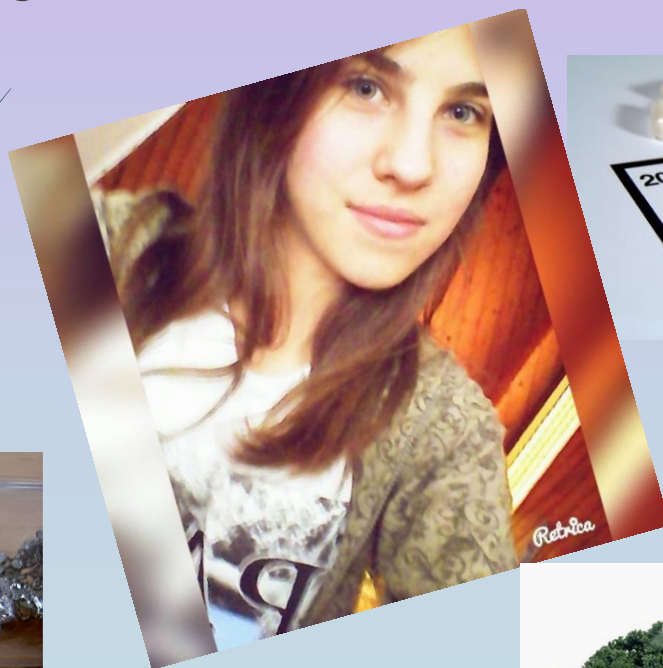
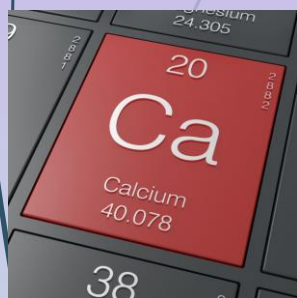


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Branko Radicevic
Smederevo, Serbia



Marija Vuckovic

The Chemical tree



20 CALCIUM

The Calcium in milk helps to strengthen the skeleton.

Ca

A graphic card for Calcium. At the top, it says "20 CALCIUM". Below this is a cartoon illustration of a superhero skeleton with blonde hair, wearing a black and yellow suit, kneeling and holding a glass of milk. At the bottom, a text box states "The Calcium in milk helps to strengthen the skeleton." and the chemical symbol "Ca" is in a circle.

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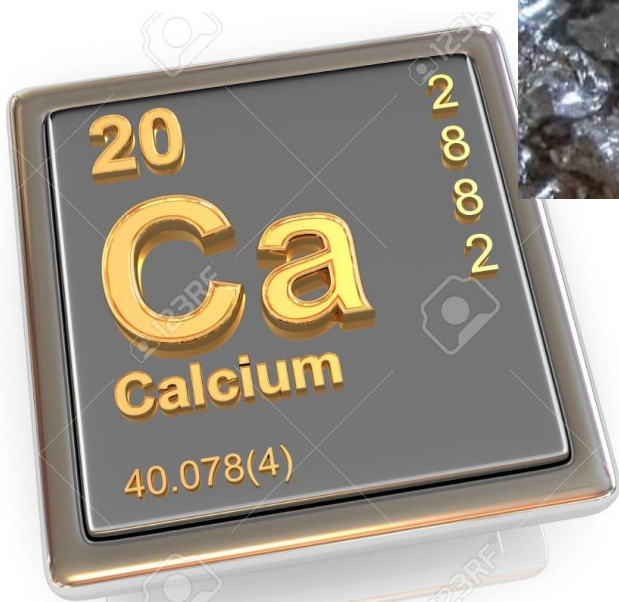
Armenia



Rita



Kostanyan THE CHEMICAL TREE





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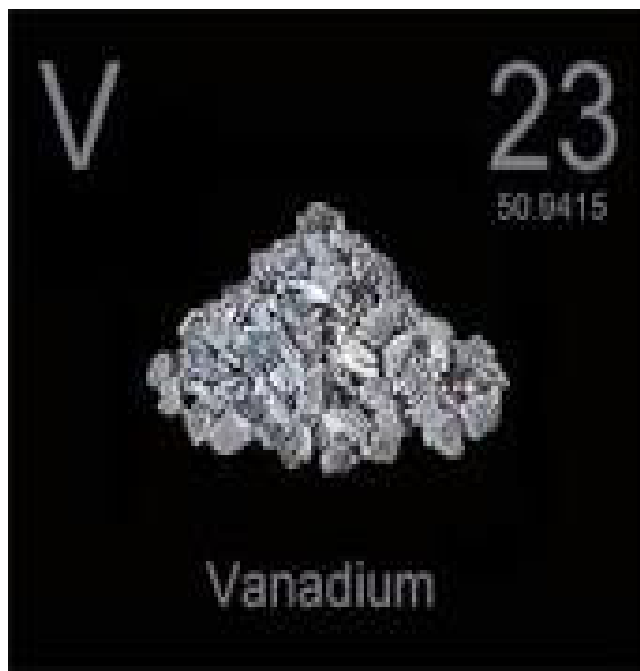
Armenia



Tigran

Epremyan

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25 Mn

Beatricia Golban

Mn  25
Manganese



Earthmovers



Mn Manganese 25
hard metal;
hard tough steel,
earthmovers,
rock crushers,
rails, plows, axes,
batteries,
fertilizer,
amethysts

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Armenia



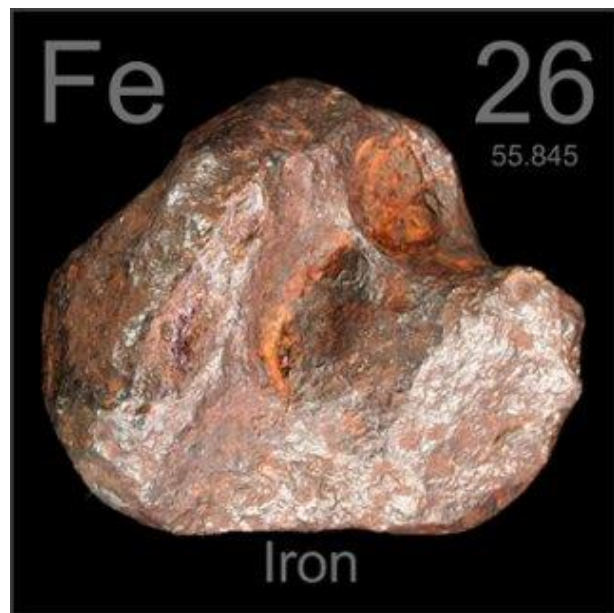
Asya



Lifelong Learning Programme

Mnacakanyan

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Jana Kostic

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26 IRON



Iron rusts by itself, which is why a lot of elements are added to it to make steel. Fe



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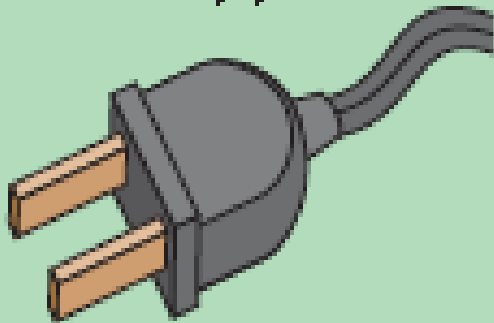


29

Cu

Egor Lucinschi

Cu  29
Copper



Electric
Wires



Cu Copper 29
colored metal,
conducts heat and
electricity well;
wires, cookware,
brass (Cu-Zn),
bronze (Cu-Sn),
coins, pipes,
blue crab blood

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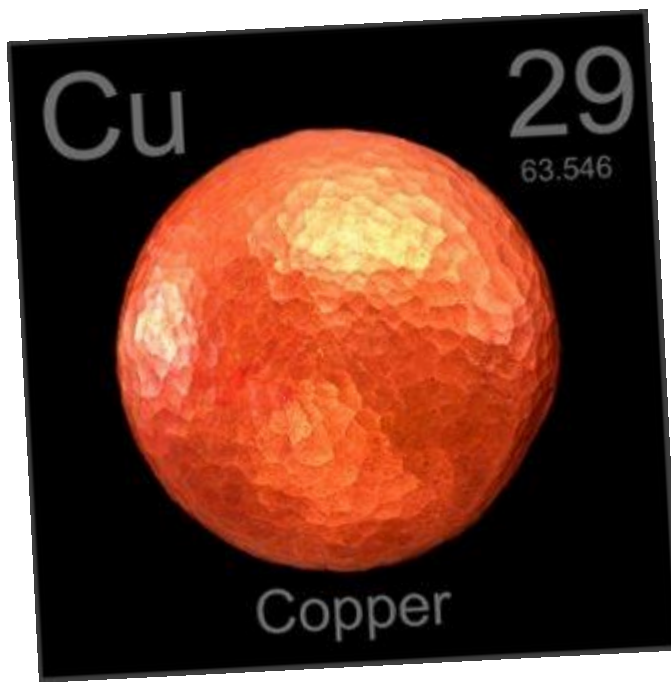
Armenia



Narine

Haroyan

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Armenia

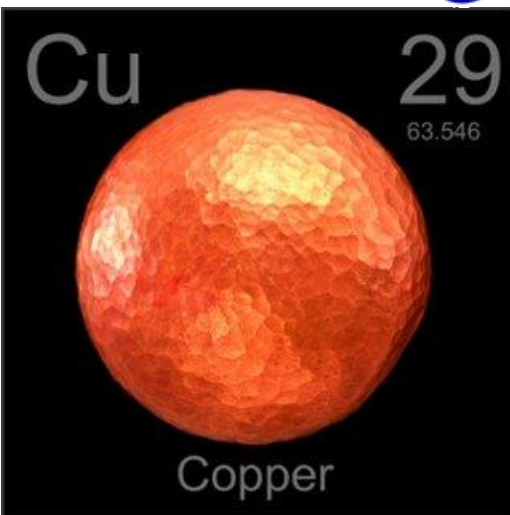
Mariam



Harutyunyan

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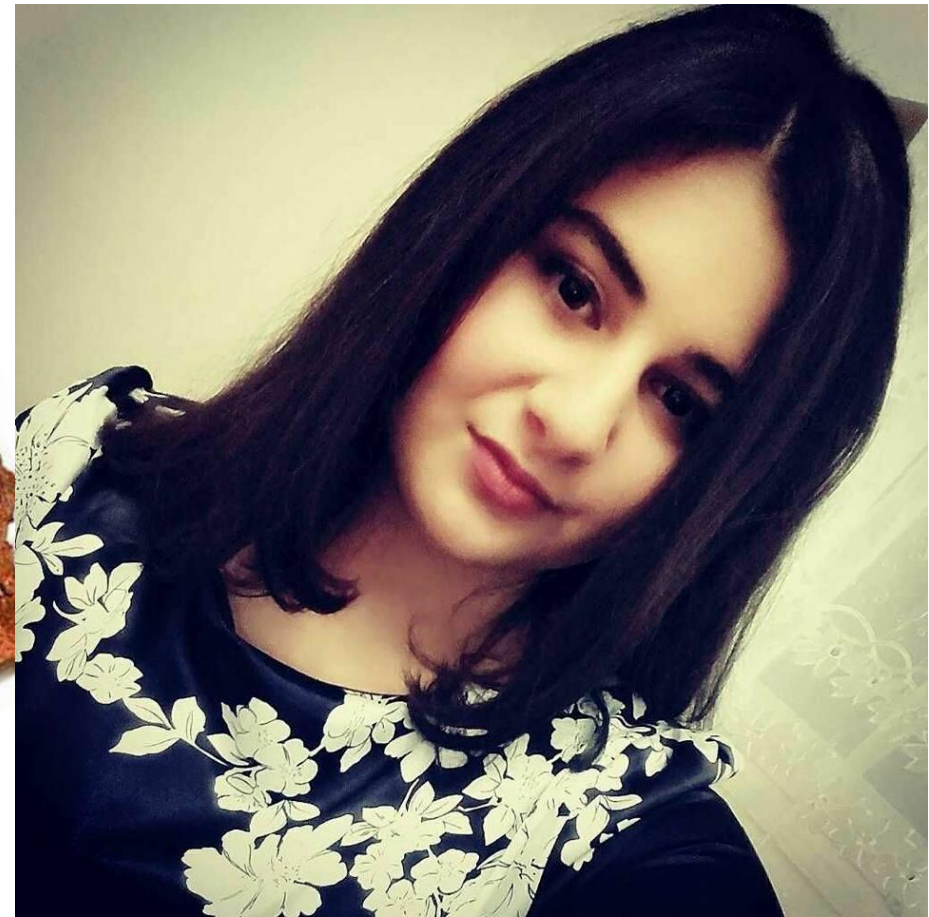
Armenia



Ashy

Ohanyan

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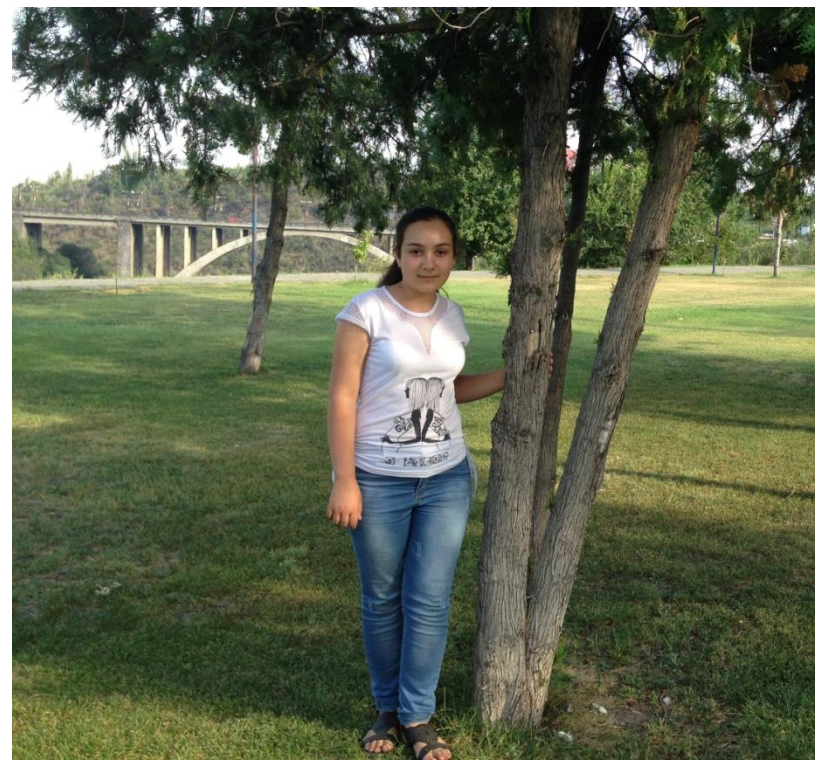
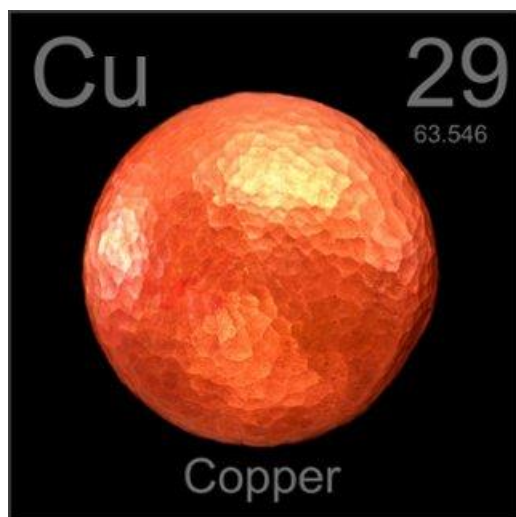


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Narine

Tsaturyan

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31

Ga

Alina Muntean

Ga  31
Gallium



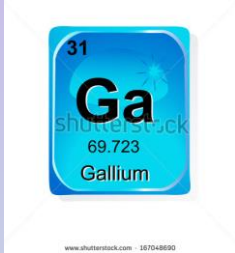
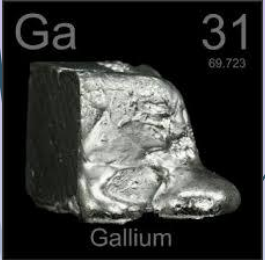
Light-Emitting
Diodes (LEDs)



Ga Gallium 31
soft metal, melts
on a hot day;
semiconductors,
light-emitting
diodes (LEDs)
(GaAs),
signal lights,
tiny lasers



Milan
Stojanovic



The Chemical tree

31 GALLIUM



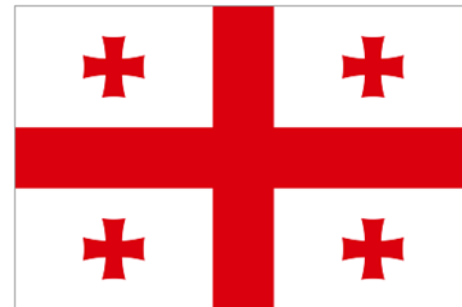
Gallium spoons melt when served in hot beverages. Ga

image © Royce D.

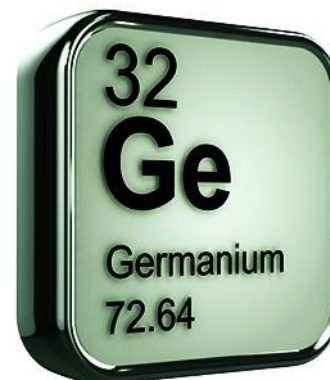
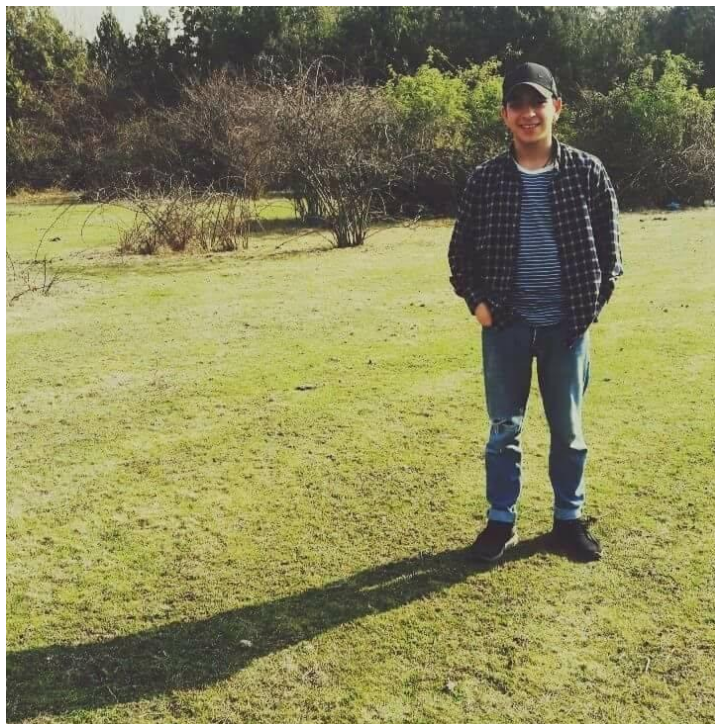


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Anri Aivazashvili





Napareuli public school

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Lika Kvarelashvili



35

Br

Bromine

79.904

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37

Rb

Valeria Ciubuc

Rb  37

Rubidium



Global
Navigation



Rb Rubidium 37

soft metal,
reactive;
atomic clocks,
global navigation
(GPS),
vacuum tube
scavenger

Mrgavan Secondary School

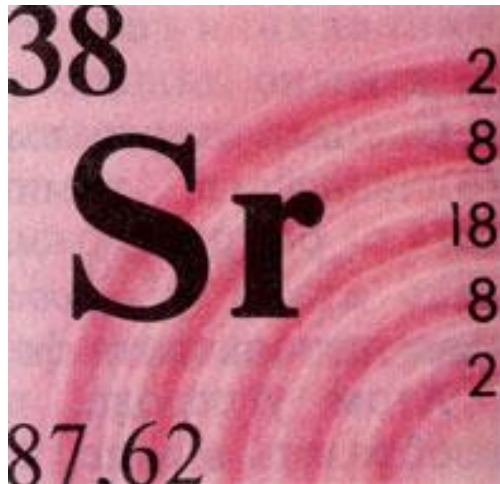
Armenia



Elen

Badalyan

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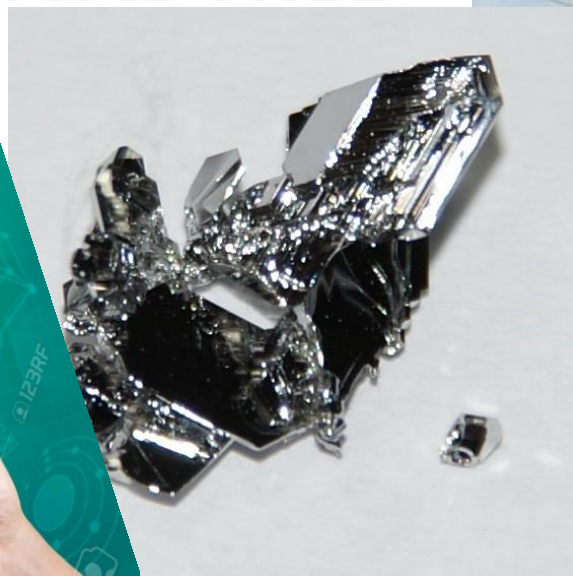


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Ani



Gabrielyan THE CHEMICAL TREE

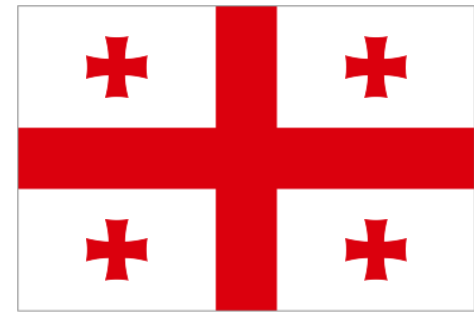




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Nino Davitelashvili



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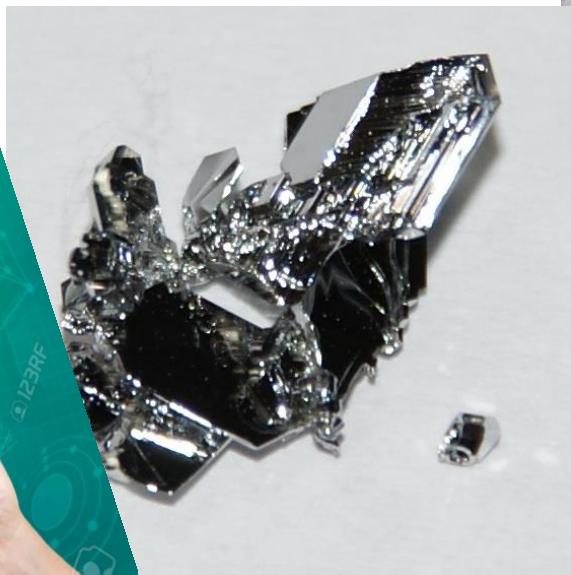
Armenia



Lianush

Ghazaryan

THE CHEMICAL TREE

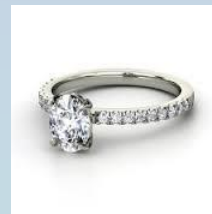
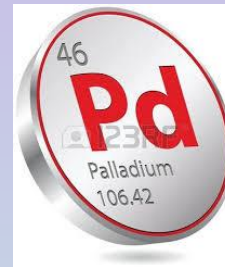




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Branko Radicevic
Smederevo, Serbia



Dejana Popovic

An illustration of a character named Palladium. The character is a woman with grey hair, wearing a green dress and a yellow skirt, standing with her arms outstretched. She is surrounded by a circular, smoky or gaseous aura. The number "46" and the word "PALLADIUM" are written in a green box at the top left. At the bottom right, the symbol "Pd" is written in a green circle. Below the character, a text box reads: "Palladium banishes harmful chemicals and is found in catalytic converters of cars."/>

46 PALLADIUM

Palladium banishes harmful chemicals and is found in catalytic converters of cars.

Pd

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Armenia



Jenya

Gevorgyan

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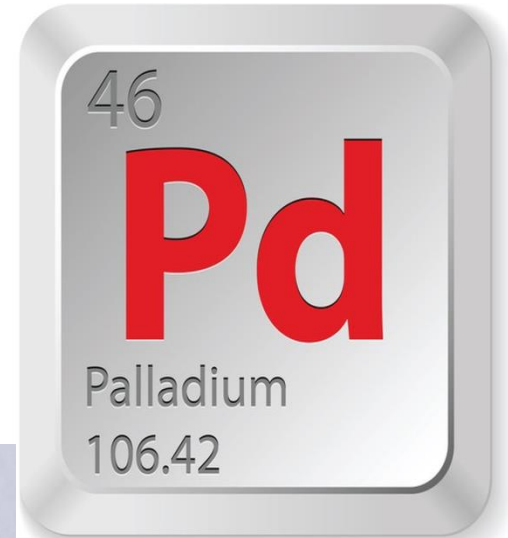




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Sopho Firalishvili



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49

In

Cristian Berezovschi

In  49

Indium



Liquid Crystal
Displays (LCDs)



In Indium 49

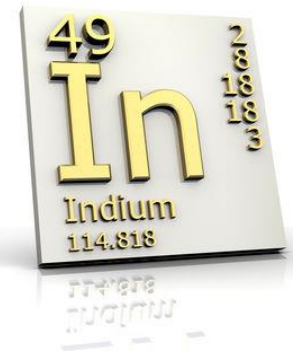
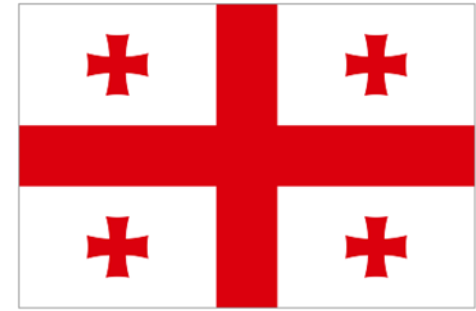
soft metal;
solders,
glass seals,
glass coatings,
liquid crystal
displays (LCDs),
semiconductors,
diodes, photocells



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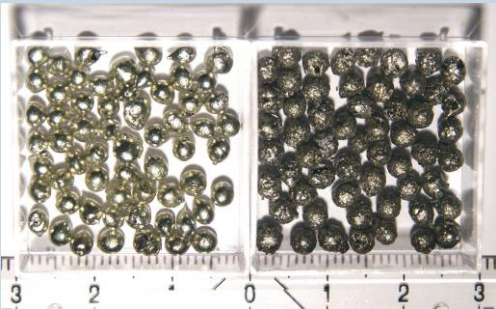
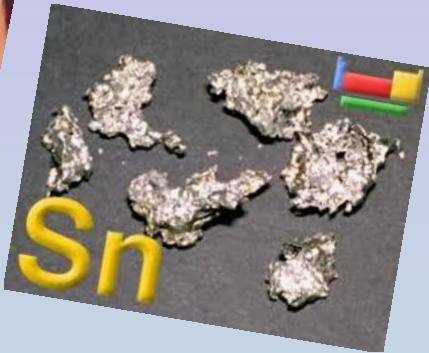
Mariam Solomnishvili






Vanja Dinic

The Chemical tree



50 TIN



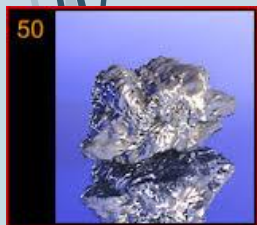
Tin was once widely used, but has largely been replaced by Aluminum in metal cans. Sn

Primary school
Branko Radicevic
Smederevo,
Serbia



Veljko Maksimovic

The Chemical tree



50 TIN



Tin was once widely used, but has largely been replaced by Aluminum in metal cans.

Sn

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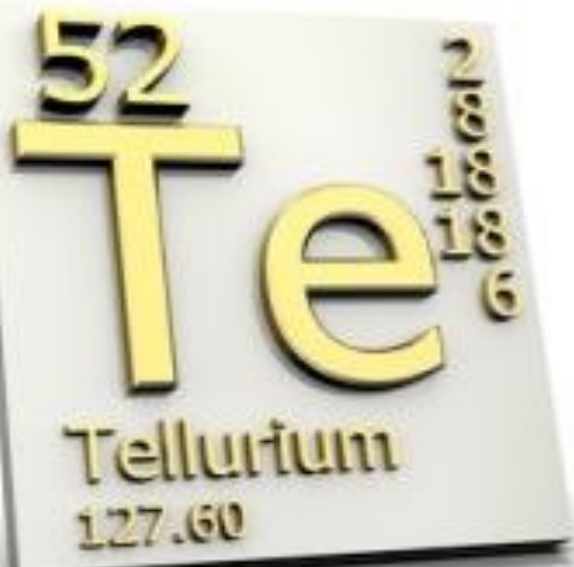
Armenia



Naira

Nahapetyan

THE CHEMICAL TREE



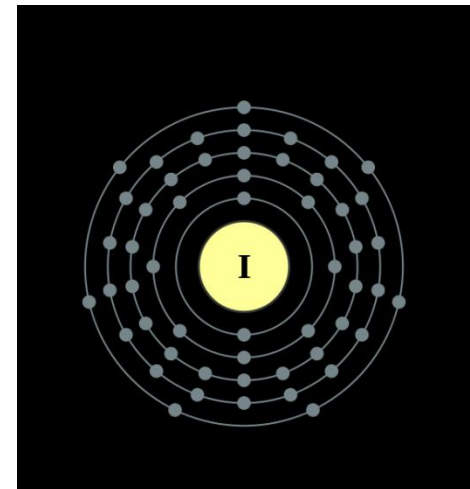


Napareuli public school

eTwinning



Lasha Okromchedlishvili:





Nevena Stevanovic

Primary school
Branko Radicevic
Smederevo
Serbia

56
Ba
Barium
137.327





Ba 56
137.33



Barium



56 BARIUM



Barium is a reactive metal that burns easily in air.

Ba

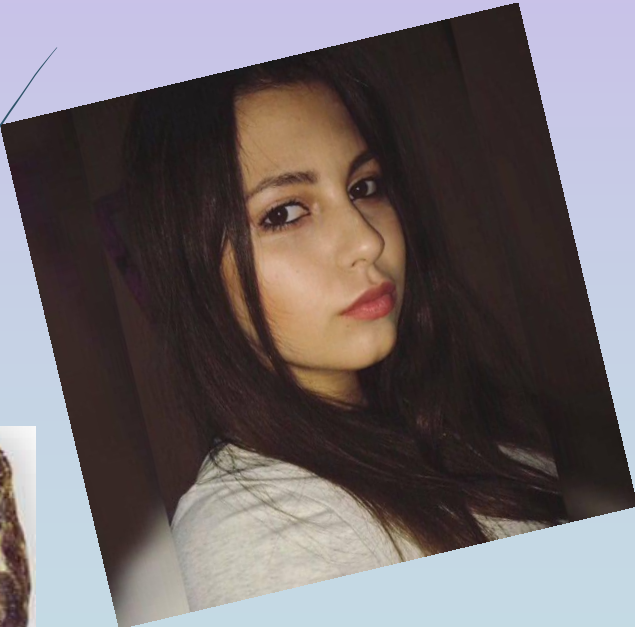
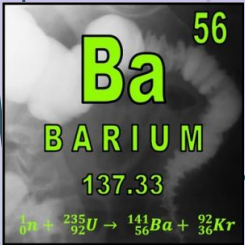


Primary school
Branko Radicevic
Smederevo, Serbia




Kristina Aleksic

The Chemical tree



56 **BARIUM**



Barium is a reactive metal that burns easily in air.

Ba

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Armenia



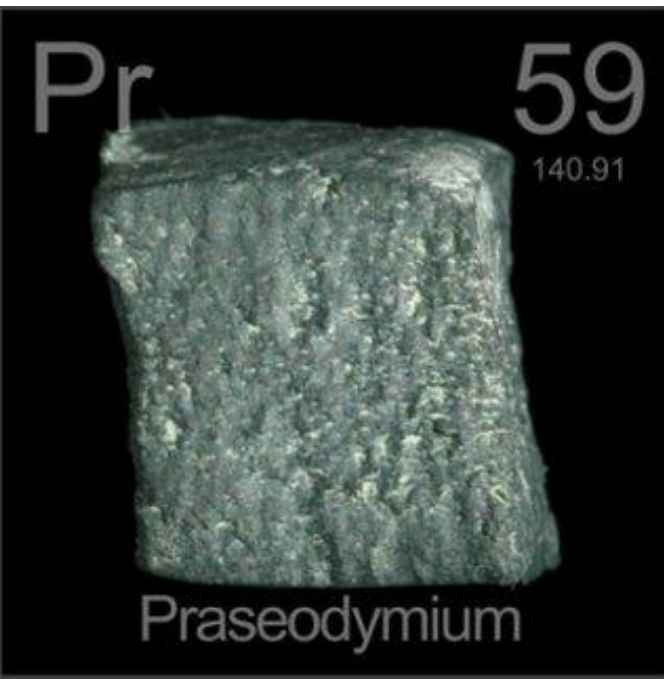
eTwinning

Hasmik



Melqonyan

THE CHEMICAL TREE



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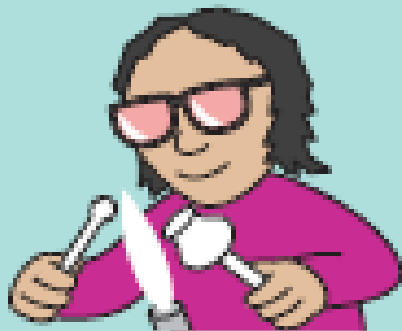


59

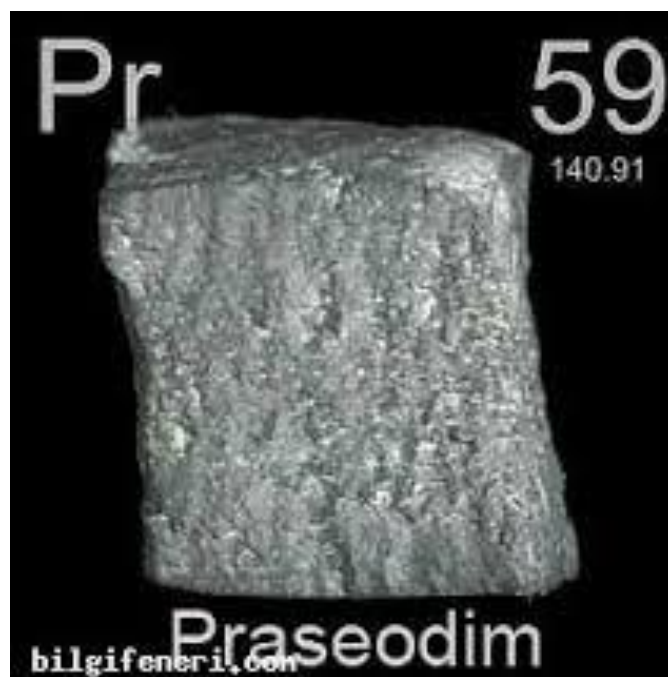
Pr

Camelia-Maria Dudnic

Pr  59
Praseodymium



Torchworkers'
Eyeglasses



Pr Praseodymium 59
soft metal;
torchworkers'
didymium eye-
glasses (Pr-Nd),
lighter flints,
arc lamps,
magnets,
yellow glass

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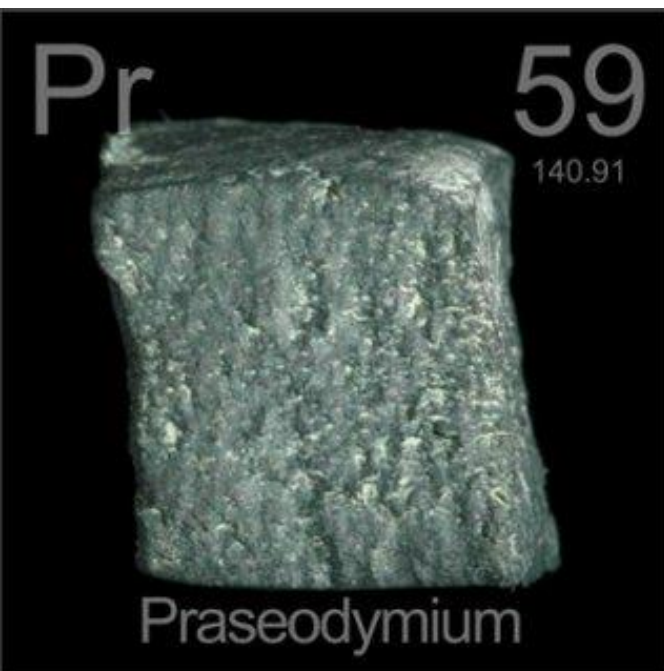
Armenia



Hayk

Sayadyan

THE CHEMICAL TREE



Mrgavan Secondary School



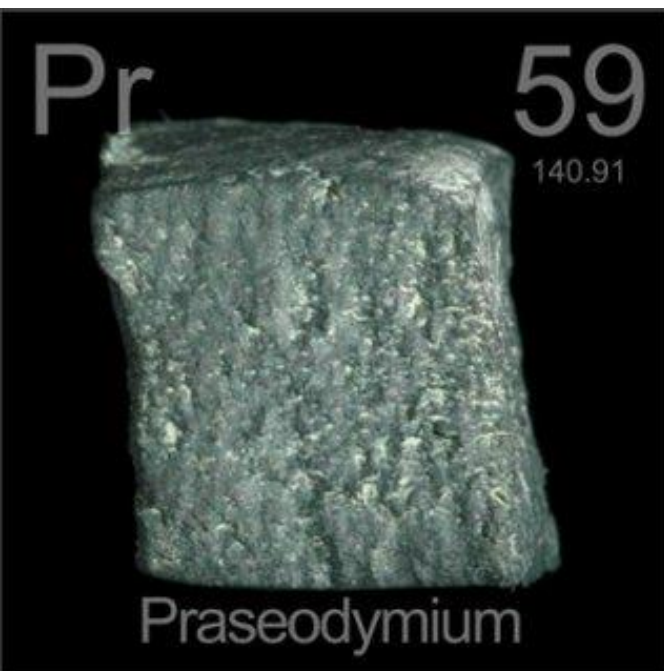
Armenia



Vahe

Zohrabyan

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61

Pm

Gleb Potehin

Pm    61
Promethium



Luminous
Dials



Pm Promethium 61
radioactive,
long-lived;
human-made,
small traces
in nature,
luminous dials,
sheet thickness
gauges

Mrgavan Secondary School

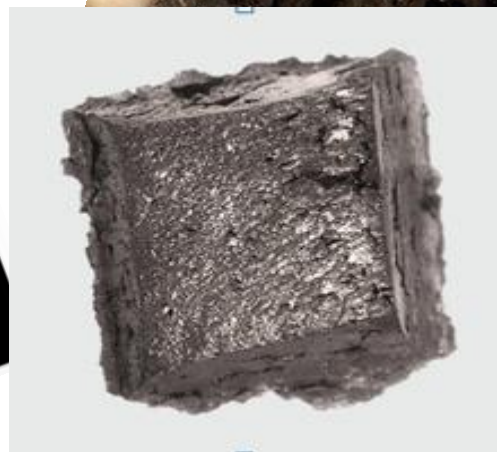
Armenia



Shush

Khachatryan

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Primary school
Branko Radicevic
Smederevo,
Serbia



Kristina Spasic

The Chemical tree



62 SAMARIUM

A cartoon character with long, spiky blue hair, wearing a black and white outfit, playing a red electric guitar. The character is standing on a blue circular base.

Samarium can sometimes be found in electric guitar pickups.

Sm





eTwinning

Armenia



Ani

Simonyan

THE CHEMICAL TREE

65

Tb



Terbium

Tb

65
158.92



Terbium



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Armenia



Pavel

Galstyan

THE CHEMICAL TREE

65 Tb



Terbium



Tb

65
158.92



Terbium

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67

Ho

Alexandru Nedelcu

Ho  67

Holmium



Laser
Surgery



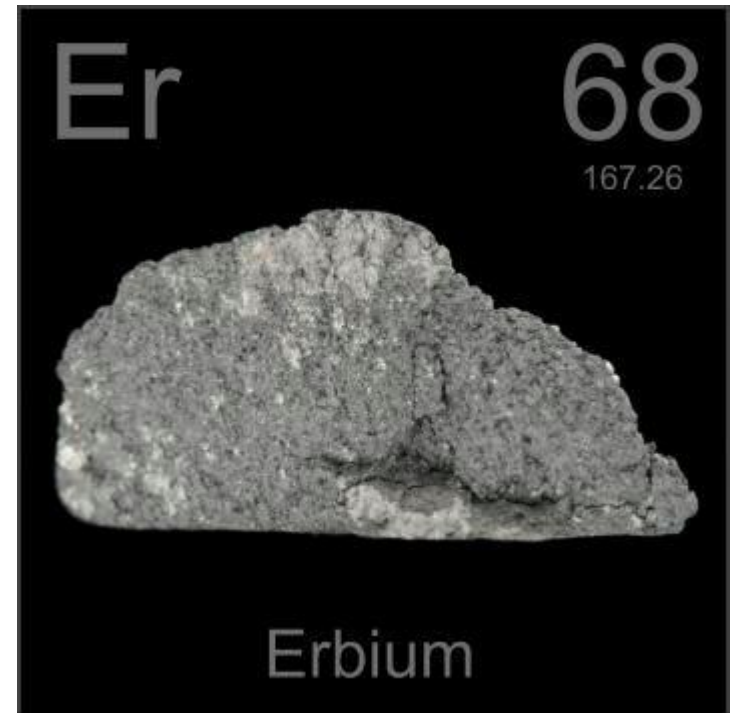
Ho Holmium 67
soft metal;
infrared lasers,
laser surgery,
eye-safe laser
rangefinders,
computer disks,
yellow glass filters



Napareuli public school

eTwinning

Giorgi Gauarashvili



Mrgavan Secondary School



Armenia



eTwinning

Gohar



Mnacakanyan

THE CHEMICAL TREE

Er

68

167.26



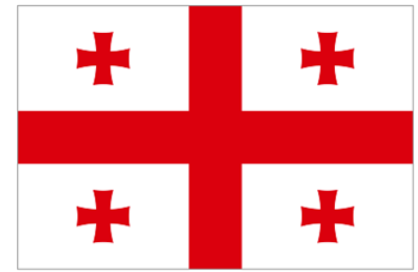
Erbium



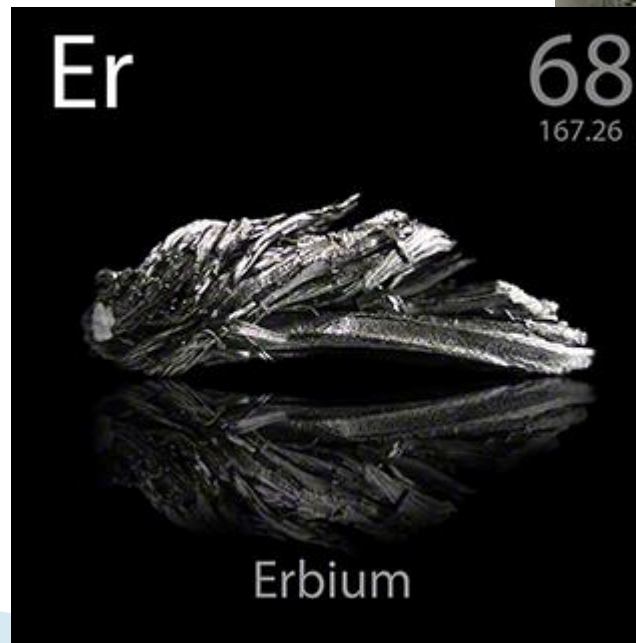


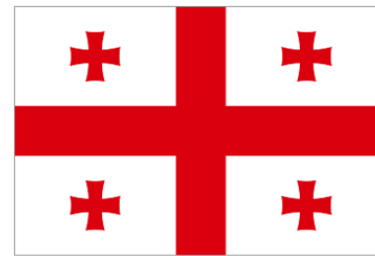
Napareuli public school

eTwinning

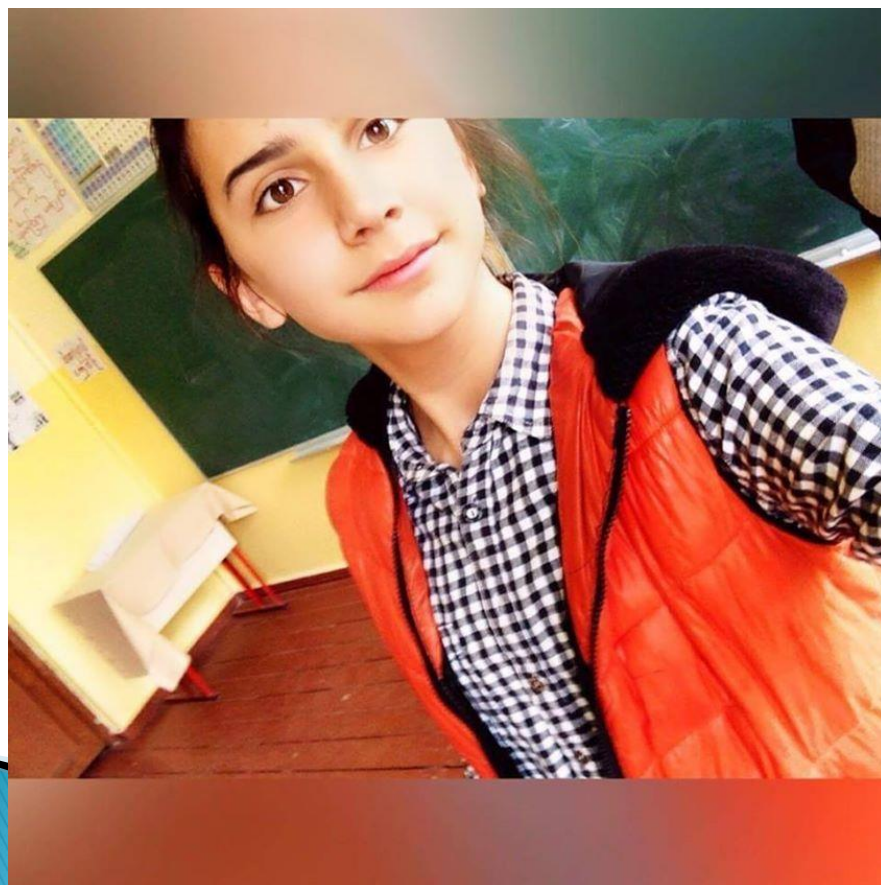


Eka Okromchedlishvili





Nini Aleksidze



Er 68
167.26



Erbium

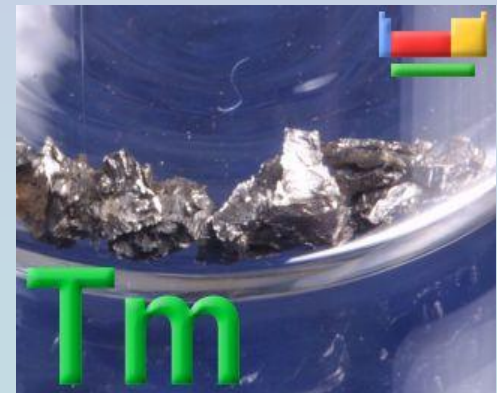
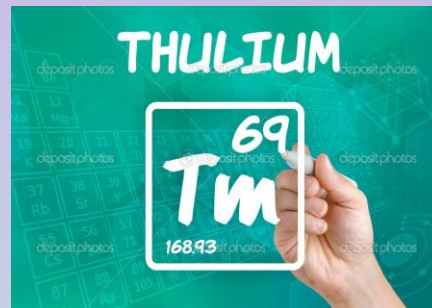


Primary school Branko Radicevic Smederevo, Serbia



Sladjana Rankovic

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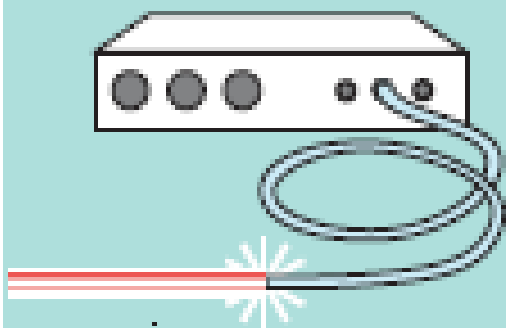
70

Yb

Alexandr Cara

Yb  70

Ytterbium



Scientific
Fiber Lasers



Yb Ytterbium 70
soft metal;
fiber optic
signal amplifiers,
infrared
fiber lasers,
stainless steel
alloys

Mrgavan Secondary School



Armenia



Gohar



Manukyan

THE CHEMICAL TREE



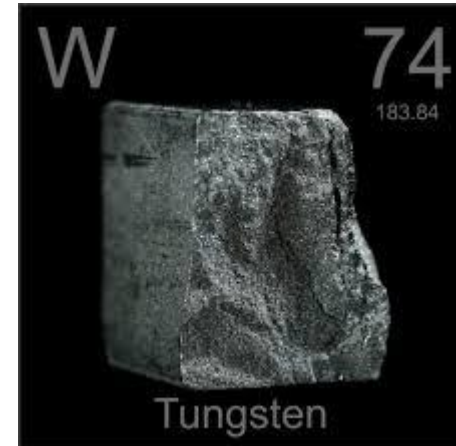


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eTwinning



Oto Otiashvili



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77

Ir

Ariana Şavga

Ir   77
Iridium



Spark Plugs



Ir Iridium 77
non-corroding
hard metal,
densest element
(same as osmium);
labware,
spark plugs,
pen tips, needles

Mrgavan Secondary School



Armenia

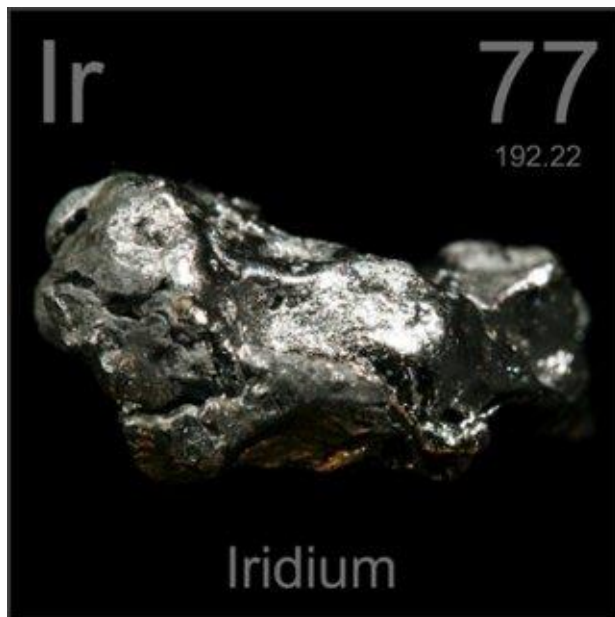
Gegham

eTwinning



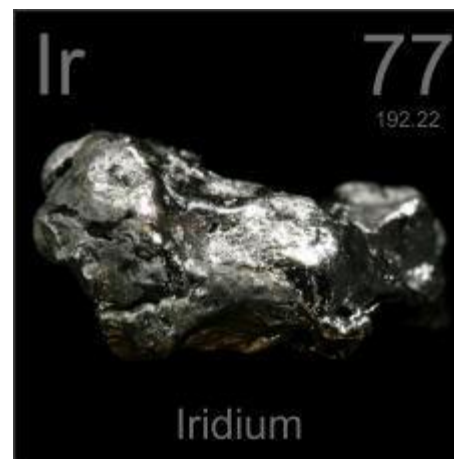
Avagyan

THE CHEMICAL TREE





Anjela Ismailovi





Primary school
Branko Radicevic
Smederevo, Serbia



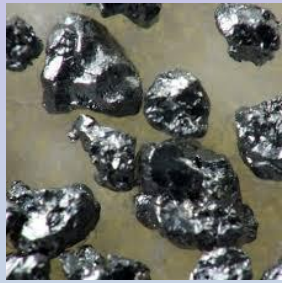
Jana
Radosevic

The Chemical tree

77 IRIDIUM

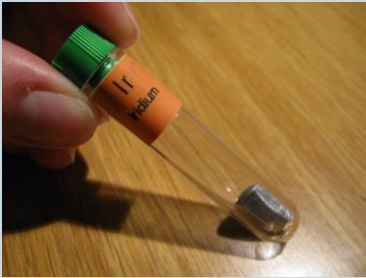
Iridium can be found in many asteroids that landed on earth.

Ir



Ir 77
192.22

Iridium



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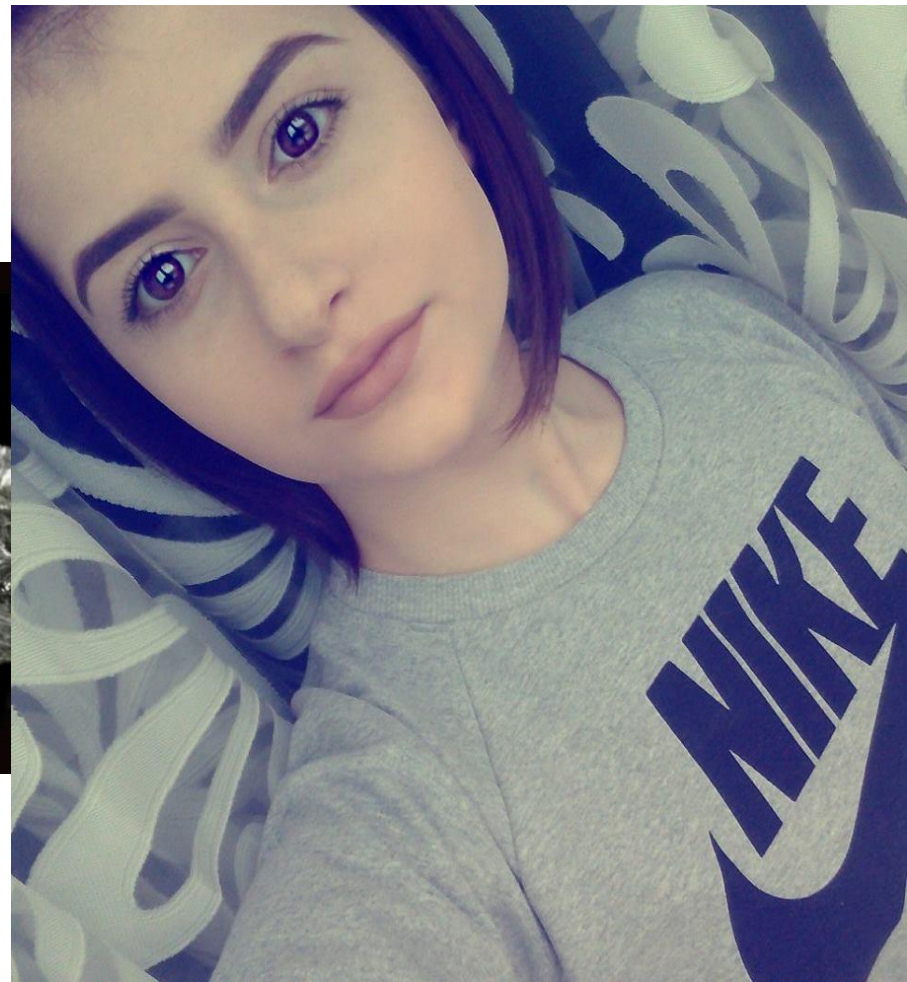
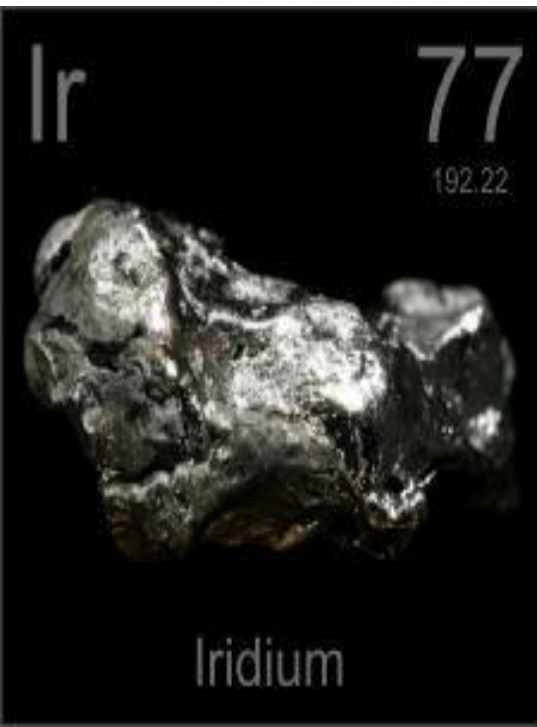
Armenia

Liana



Vardanyan

THE CHEMICAL TREE



eTwinning



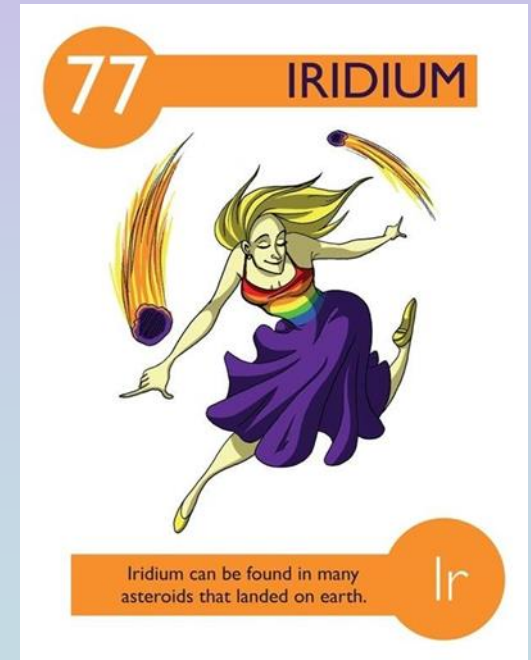
Teodora Katic



Primary school
Branko Radicevic
Smederevo,
Serbia



The Chemical tree



Mrgavan Secondary School



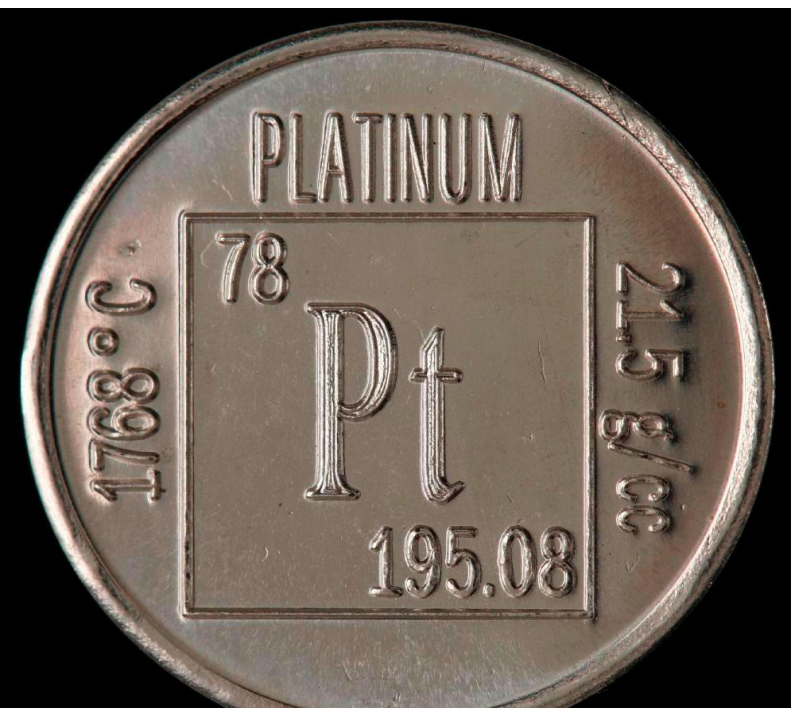
Armenia

Mariam



Vardanyan

THE CHEMICAL TREE





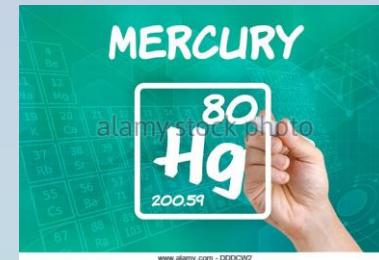
Primary school
Branko Radicevic
Smederevo, Serbia



Nevena Kojic



The Chemical tree



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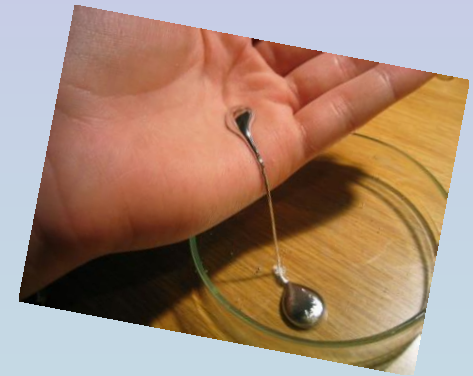
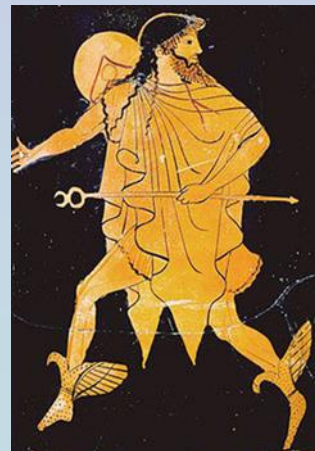
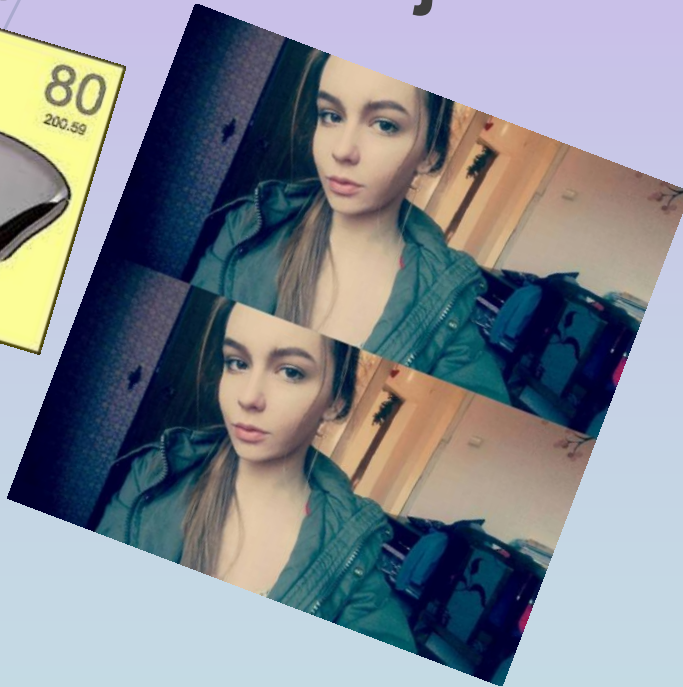


Primary school
Branko Radicevic
Smederevo,
Serbia



Stasha Banjanin

The Chemical tree





Lasha Zaraspishvili



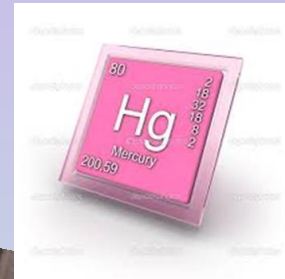


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Smederevo, Serbia



Bogdan Zlatanovic

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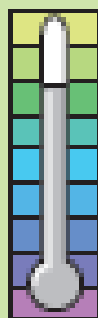


81

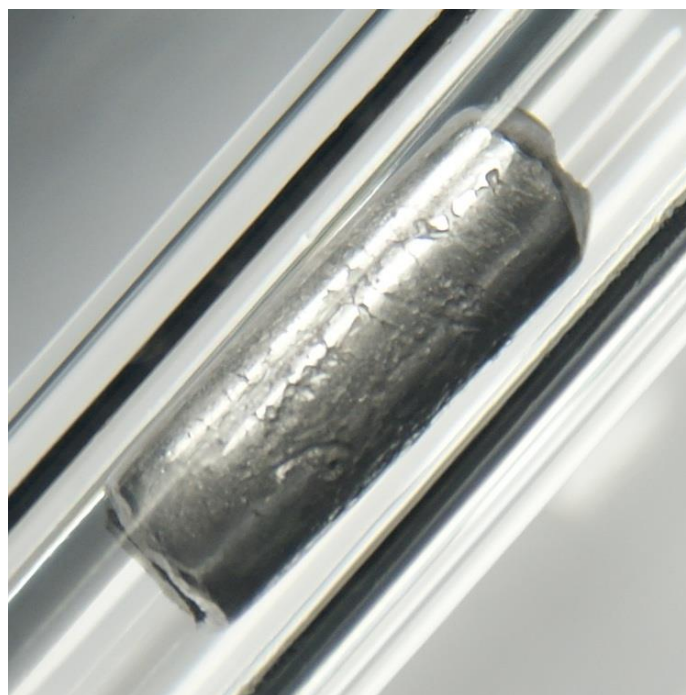
Tl

Maria-Mihaela Fetcu

Tl  81
Thallium



Low-Temperature
Thermometers



Tl Thallium 81
soft metal,
toxic;
low-melting-point
mercury alloys,
low-temperature
thermometers,
undersea lamps,
photocells

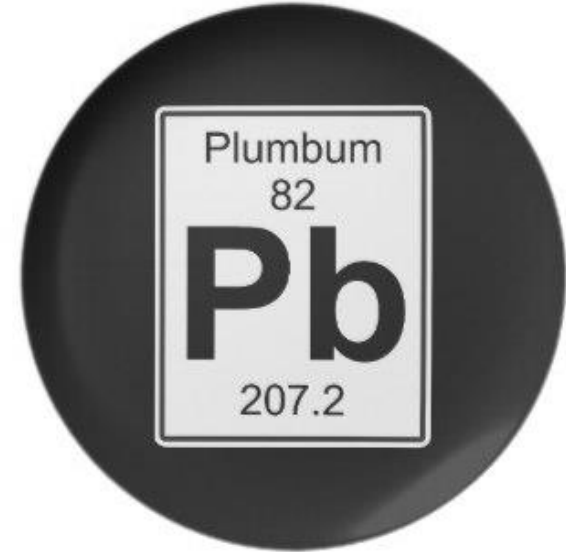


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Keti Natatrishvili



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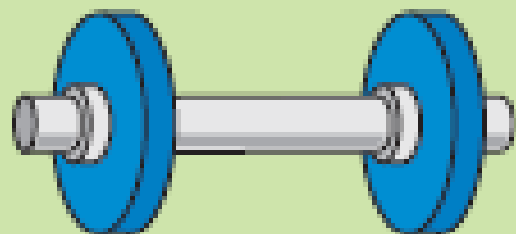
82

Pb

Cristina Cebotar

Pb  82

Lead



Weights



Pb Lead 82

dense, soft,
non-corroding
metal, toxic;
weights, solders,
batteries, bullets,
crystal glass,
old plumbing,
radiation shield

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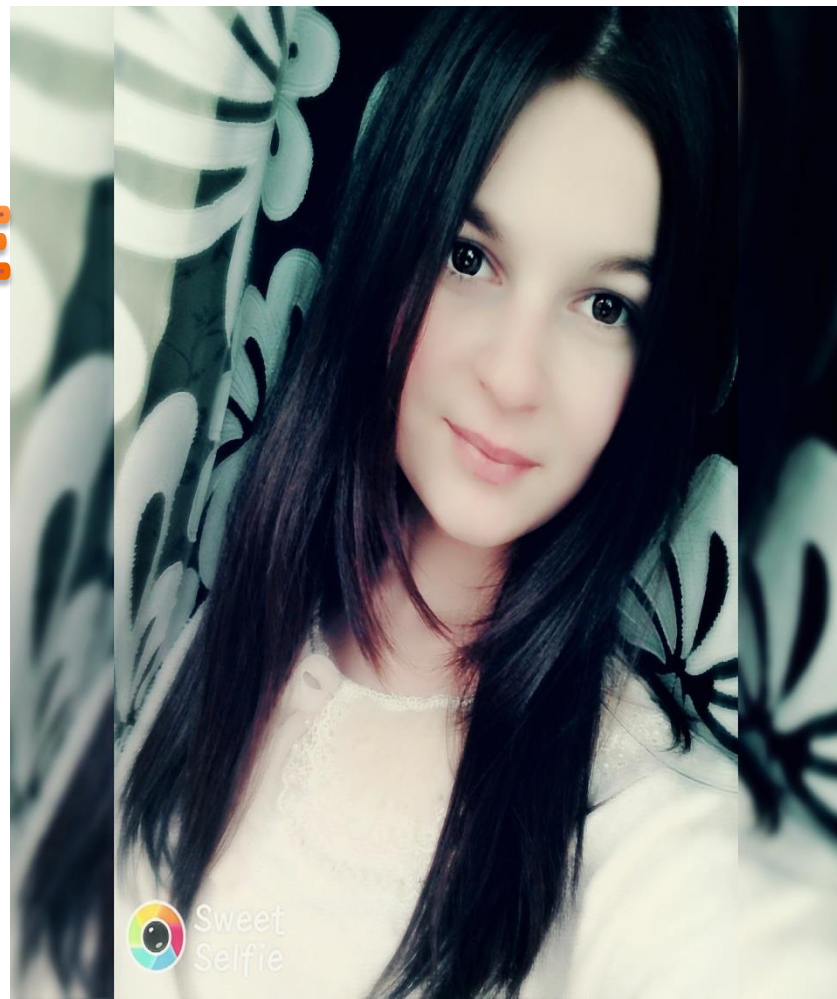
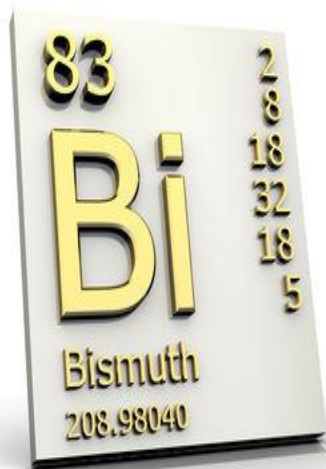
Armenia

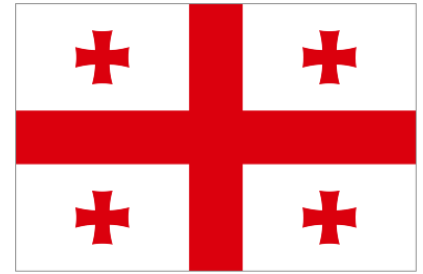


eTwinning **Diana**

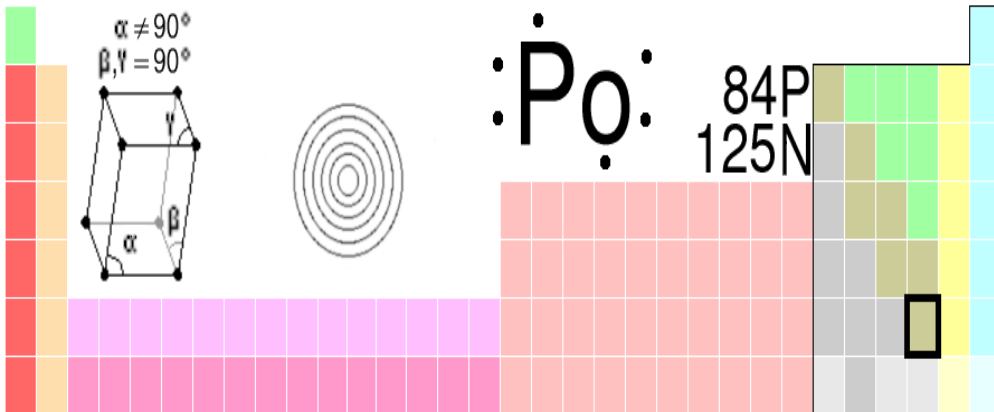
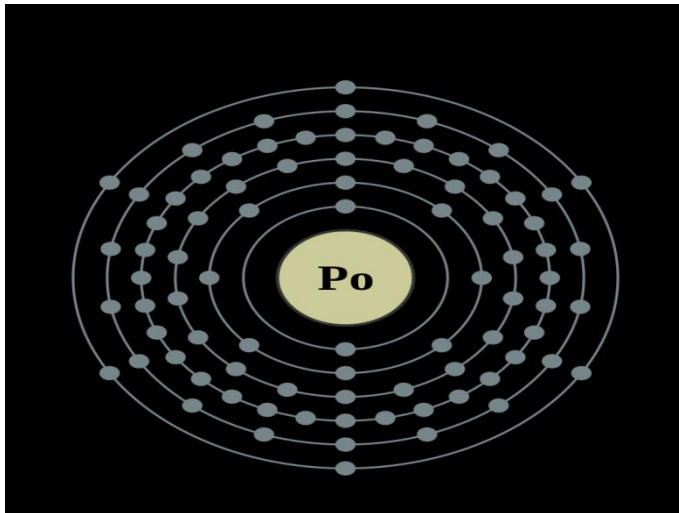
Vardanyan

THE CHEMICAL TREE





Nino Saakashvili



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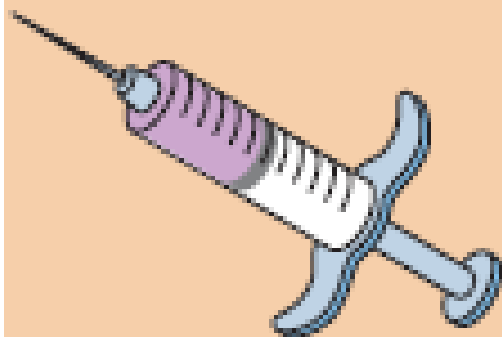


85

At

Stas Beşliu

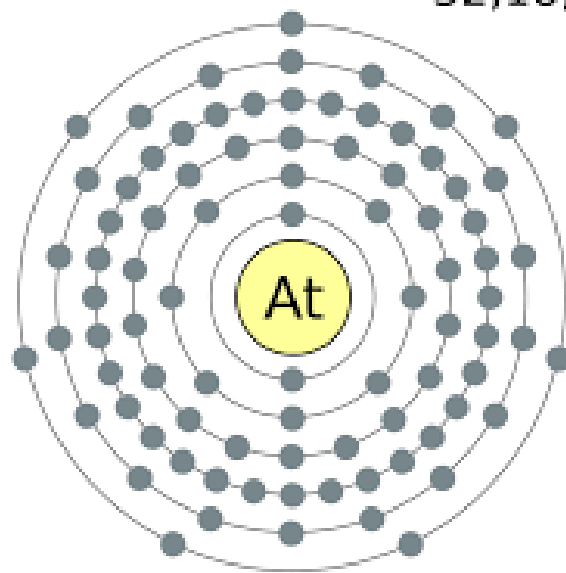
At  85
Astatine



Radioactive
Medicine

85: Astatine

2,8,18,
32,18,7



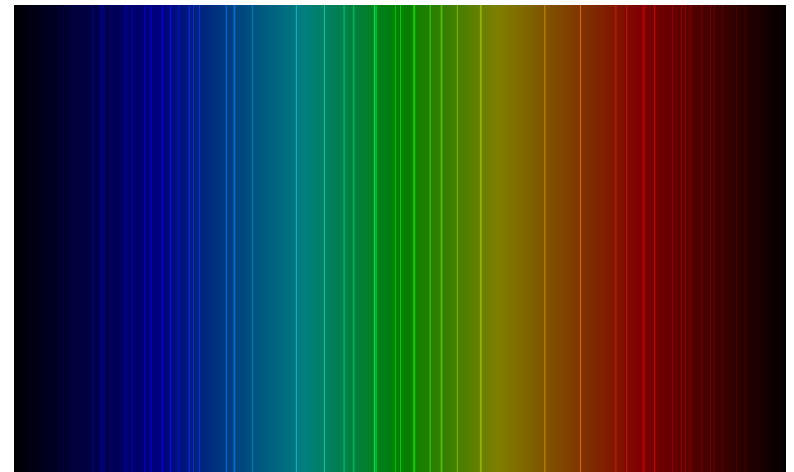
At Astatine 85
radioactive,
short-lived;
small traces
in nature,
cancer medicine



Napareuli public school

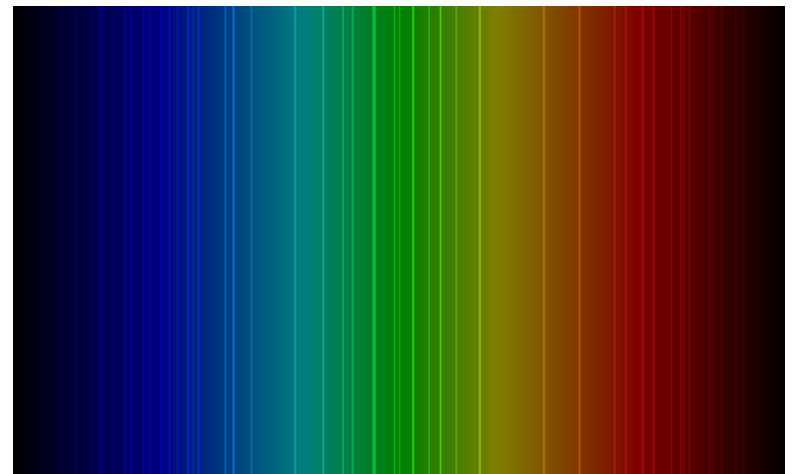
eTwinning

Mariam korbudiani





Elene Mamalashvili



Mrgavan Secondary School



Armenia



Tigran

Galstyan

THE CHEMICAL TREE



Ac  89
227.



Actinium

Mrgavan Secondary School

Armenia

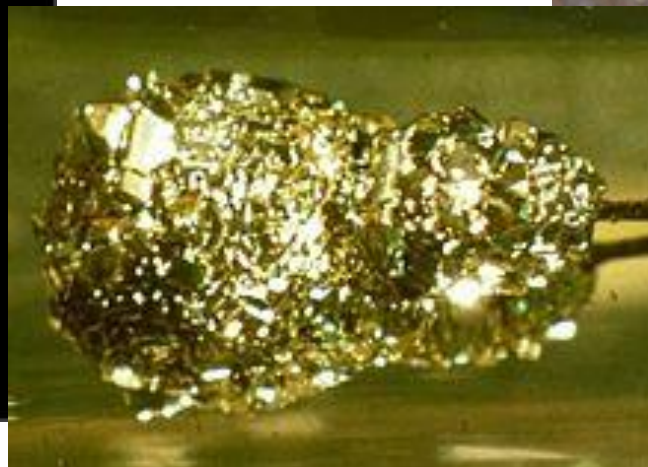
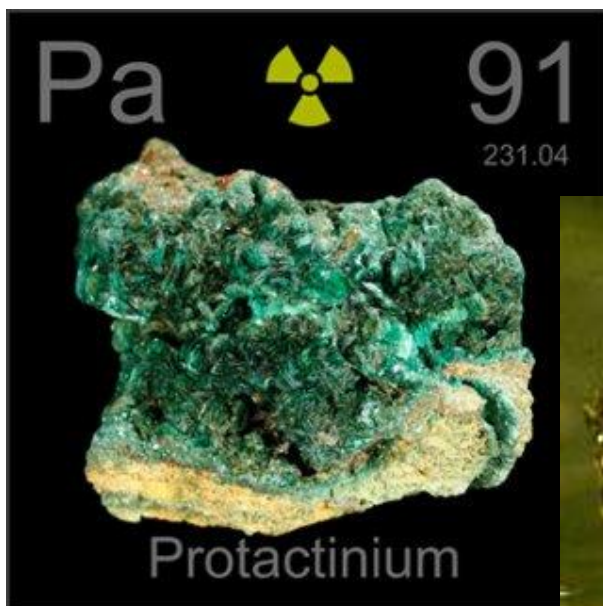


Chris

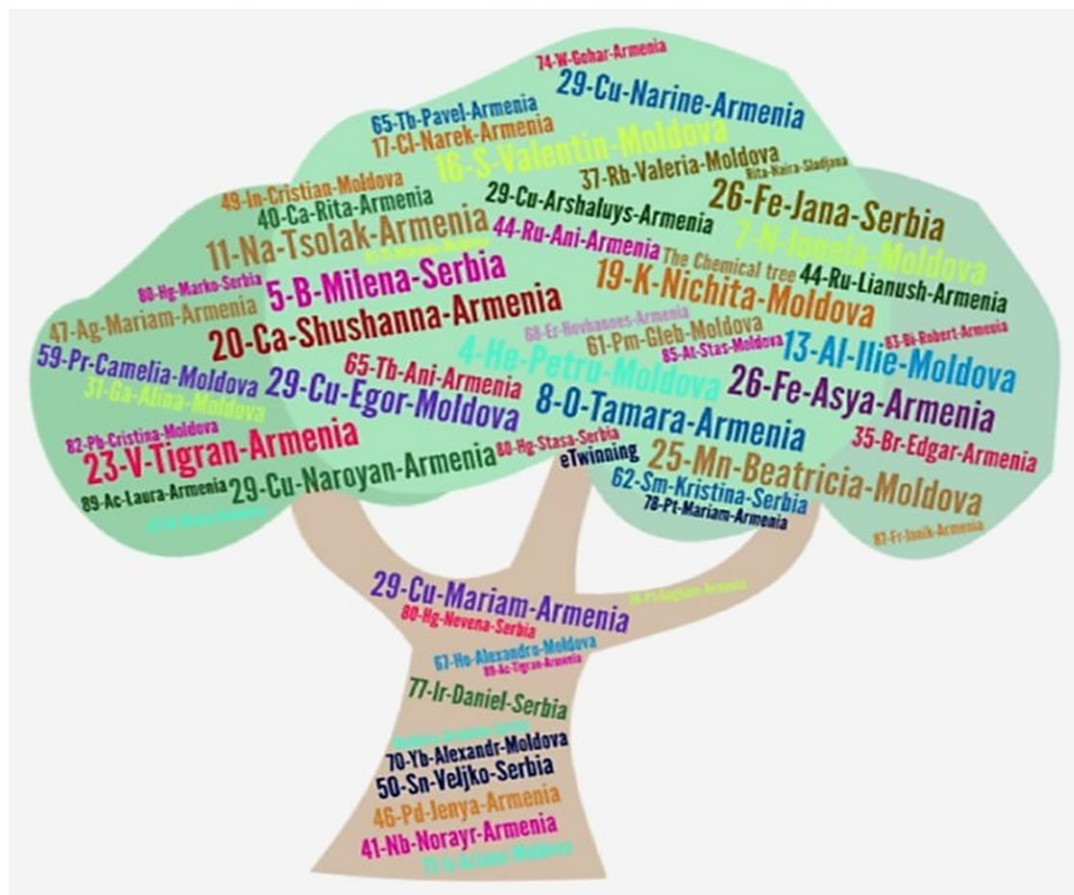


Ginosyan

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MOLDOVA-ARMENIA-SERBIA-
GEORGIA