

## **To Whom This May Concern**

The following case files provided are under current police investigation and must only be opened by the recipient of this letter.

Greetings,

Evidence found at the crime scene of **Case 97241** requires external aid from a chemist. Division 11 officers require you to decode the information provided within the note. As of now, it has been confirmed that an understanding of the periodic table and its contents is required to solve the note. Please update the investigation team of your progress regarding the note as soon as possible. Refer to the following attached case file.

**The contained information is confidential and if shared with any third party will have its holder liable for persecution and breach of privacy and legislation. By signing this form, you confirm that you have read this statement and agree to its terms and conditions.**

Name (PRINT): \_\_\_\_\_ Signature: \_\_\_\_\_

Police Station  
Division 11  
Toronto, L5H 8JR  
Ontario, Canada

**CONFIDENTIAL**



**THE CRAZY SCIENTIST**

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# POLICE REPORT

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<b>Case No: 97241</b>	<b>Suspect: Larry Smith</b>
<b>Date: 02/01/2021</b>	<b>Incident Type: Kidnapping</b>

## **Incident Details:**

The 3 children of Ms. Smith were initially reported missing at 3:49 AM on 02/01/2021. Further investigation led us to believe that our leading suspect, her ex-husband, has abducted their children. However, the suspect's and victims' whereabouts are currently unknown.

## **Background Search on Suspect:**

A background search using the suspects personal information provided by the ex-wife has revealed that the suspect last visited a casino near the incident location during New Year's 2021 celebration. Casino employees reported the suspect screaming in fury after losing substantial amounts of money. The suspect fled the casino and is currently a target for mafia members who own the casino. It is suspected that the children may have been abducted for the purpose of collecting a ransom to pay off debts.

## **Current Investigation:**

The kidnapper left behind a hand-written ransom note that was found under one of the children's pillows. The note contains an encrypted message of the suspect's demands. Upon receiving a search warrant and investigating Mr. Smith's office, pictures of different individuals were posted up all over the walls, in addition to a large periodic table with illegible scribbles. The photos of the individuals were identified to be the scientists Niels Bohr, Arnold

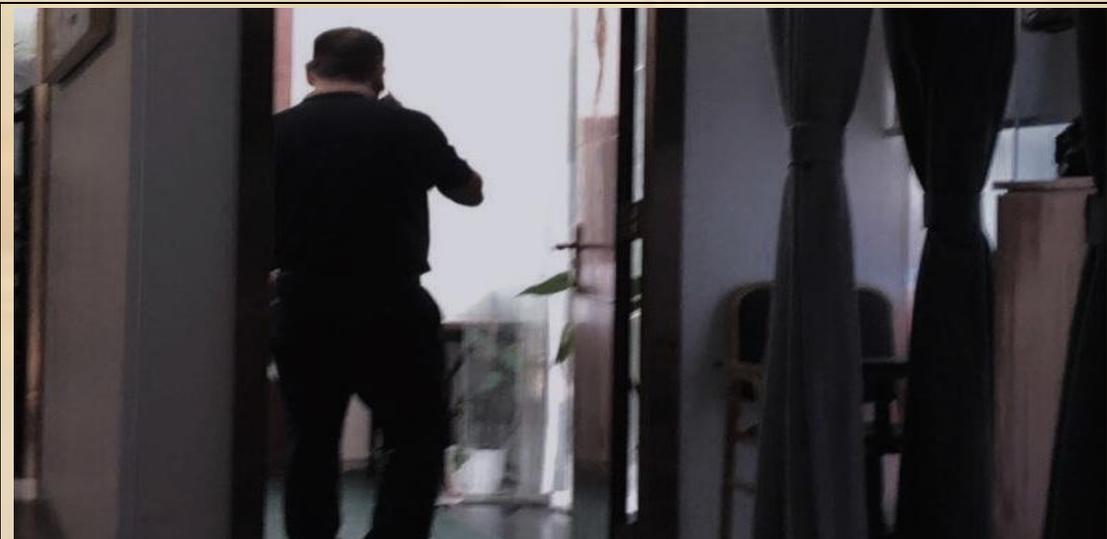
Sommerfeld, George Uhlenbeck, and Samuel Goudsmit. Our investigators believe that this information relates to the note provided by the suspect. Background investigation indicates the individual to have a successful career as an inorganic chemist. Further investigation of his house and belongings also indicates a great interest in the field of Atomic and Quantum theories. The suspect also left behind a timed voicemail to his spouse. The voicemail contains a hostile and threatening message with intent to harm the victims stating "...the note I left is your only hope to ever see your kids again...".

**Evidence Showcase:**



**Exhibit A:** Photo of suspect's room.<sup>1,2,3,4,5,6</sup>

**Description:** Room contains a periodic table and photos of four scientists.



**Exhibit B:** Photo of the suspect.

**Description:** Where the suspect was last seen.

# My Demands

(-1/2) (3) (5) (-9) (4) (2) (3) (7) (1) (1) (0) (5/4) (-5) (0) (0) (-4) (9) (-3) (1/9) (-1/2)  
 (5) (1/3) (-6) (4) (5) (3) (-1) (0) (-1) (1) (7/8) (-6) (5) (2) (0) (1/2) (-3) (1) (1) (-1/2)  
 (6) (8) (0) (-2) (2) (-7/2) (0) (3/5) (7) (1) (9) (-1) (-3/2) (2) (1) (7) (-8) (2) (-1) (1/2)  
 (7) (2) (3/5) (0) (4) (1) (3/2) (0) (5/4) (0) (-8) (2) (2) (2/3) (0) (-1) (1) (0) (4) (1/2)  
 (-5) (-6/7) (-2) (7) (4) (9) (6) (1) (4) (0) (2) (-3) (8/3) (-9) (0) (-7) (-7) (2) (2) (-1/2)  
 (2) (-1) (0) (7/5) (3) (-3) (-1) (8/7) (4) (1) (2) (-2) (0) (0) (-1) (1) (-6) (3) (-7) (-1/2)  
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 (-1/6) (-1) (7) (0) (2) (-8) (-3/4) (2) (1) (2) (-4) (5) (7) (-1) (0) (-5) (7) (9) (-1/2)  
 (1/2) (-5) (9) (3) (2) (-1/2) (7) (-5) (-3) (1) (9) (-7) (2) (0) (1) (6/5) (5) (6) (7) (-1/2)  
 (-5) (3) (-7/2) (6/7) (2) (-1) (7) (0) (0) (1) (4) (6) (5) (-9) (-1) (1) (3) (5/4) (-3) (1/2)  
 (5/8) (-3) (8) (5) (2) (-5) (0) (3) (7) (1) (1) (-2) (-5) (8) (-1) (7/9) (1/2) (2) (5) (-1/2)  
 (6) (0) (1/3) (-4) (4) (-7) (3/4) (-8) (0) (2) (-2/3) (1) (6) (0) (-2) (-7) (9) (3) (1) (1/2)  
 (4) (-3) (0) (1/5) (3) (2) (-1/2) (-6/7) (8) (1) (4) (2) (5) (9) (-1) (0) (-8) (3) (7) (-1/2)  
 (9) (-2) (1) (-1) (2) (0) (4) (-5/8) (3) (1) (-4) (5) (-7) (6) (-1) (0) (-2) (1/2) (-5) (1/2)  
 (-1) (1) (4) (3/5) (6) (-9) (0) (2) (5) (1) (6) (-7) (1/2) (9) (1) (0) (-9) (7/3) (-6) (-1/2)

In each line you shall find  
 Four numbers that are passion of mine  
 Combine their meaning in each row  
 Part of the message they will show  
 Do not be blind by the walls of numbers  
 Every fifth position your digit slumbers  
 Top to bottom each number line, left to right each hidden clue  
 Be cautious with what numbers you choose  
 The first numbers in each line  
 Describe the atom's energy and size  
 Second number describe the orbital shape  
 One step closer to the children's escape

Hand numbers present their orientation  
 Pair with shape for the electron distribution  
 Final numbers is one of opposite twins  
 That determine the electron's spin  
 Into the Subshell they will not spill  
 Negative to positive the electrons filled  
 About filling order of spin orientations  
 Positive to negative is the right consideration  
 One last twist to add to the fun  
 These electrons obey the rule of Hund  
 With all the number's meaning combine  
 My hidden message you shall find

--- G \$50 ---, ---, ---, to L7KOC4 on the  
 --- u ---

**Exhibit C:** Photo of the notes (page 1).  
**Description:** A demand written by the kidnapper containing a series of codes that result in a cryptic message.

**PRINT VERSION OF NOTE**  
**(Section: The Demands)**

**The Hidden Message:**

\_\_\_\_\_ G \$50 \_\_\_\_\_, \_\_\_\_\_, TO L7K0C4  
OR THE \_\_\_\_\_ U \_\_\_\_\_

**The Attached Number Walls:**

(-1/2) (3) (5) (-9) (4) (2) (3) (7) (1) (1) (0) (5/4) (-5) (0) (0) (-4) (9) (-3) (1/9) (-1/2)  
(5) (1/3) (-6) (4) (5) (3) (-1) (0) (-1) (1) (7/8) (-6) (5) (2) (0) (1/2) (-3) (1) (1) (-1/2)  
(6) (8) (0) (-2) (2) (-1/2) (0) (3/5) (7) (1) (9) (-1) (-3/2) (2) (1) (7) (-8) (2) (-1) (1/2)  
(7) (-2) (3/5) (0) (4) (1) (3/2) (0) (5/4) (0) (-8) (2) (2) (2/3) (0) (-1) (1) (0) (4) (1/2)  
(-5) (-6/7) (-2) (7) (4) (9) (6) (1) (4) (0) (2) (-3) (8/3) (-9) (0) (-7) (-3) (2) (2) (-1/2)  
(2) (-1) (0) (7/5) (3) (-3) (-1) (8/7) (4) (1) (2) (-2) (0) (0) (-1) (1) (-6) (3) (-7) (-1/2)  
(-4) (9) (4/7) (-1) (1) (0) (-6) (3) (-5) (0) (-9) (0) (1) (1) (0) (-2) (-5) (-2) (1/2) (1/2)  
(5) (5) (6) (-2) (3) (5/6) (-1/2) (2) (0) (1) (-4) (8) (-2/5) (0) (-1) (3) (2) (-6) (7) (1/2)  
(-1/6) (-1) (7) (0) (2) (5) (-8) (-3/4) (2) (1) (2) (-4) (5) (7) (-1) (0) (-5) (7) (9) (-1/2)  
(1/2) (-5) (9) (3) (2) (-1/2) (7) (-5) (-3) (1) (9) (-7) (2) (0) (1) (6/5) (5) (6) (7) (-1/2)  
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(5/8) (-3) (8) (5) (2) (-5) (0) (3) (7) (1) (1) (-2) (-5) (8) (-1) (7/9) (1/2) (2) (5) (-1/2)  
(6) (0) (1/3) (-4) (4) (-7) (3/4) (-8) (0) (2) (-2/3) (1) (6) (0) (-2) (-7) (9) (3) (1) (1/2)  
(4) (-3) (0) (1/5) (3) (2) (-1/2) (-6/7) (8) (1) (4) (2) (5) (9) (-1) (0) (-8) (3) (7) (-1/2)  
(9) (-2) (1) (-1) (2) (0) (4) (-5/8) (3) (1) (-4) (5) (-7) (6) (-1) (0) (-2) (1/2) (-5) (1/2)  
(-1) (1) (4) (3/5) (6) (-9) (0) (2) (5) (1) (6) (-7) (1/2) (9) (1) (0) (-9) (7/3) (-6) (-1/2)

**PRINT VERSION OF NOTE**  
**(Section: The Demands)**

**The Attached Riddle:**

In each line you shall find  
Four numbers that are passion of mine  
Combine their meaning in each row  
Part of the message they will show  
Do not be blind by the wall of numbers  
Every fifth position your digit slumber  
Top to bottom each number line, left to right each hidden clue  
Be cautious about what number you choose

The first number in each line  
Describe the atom's energy and size  
Second number describe the orbital shape  
One step closer to the children's escape  
Third number present their orientation  
Pair with shape for the electron distribution  
Final number is one of opposite twins  
That determine the electron's spin

Into the subshell they will not spill  
Negative to positive the electrons filled  
About filling order of spin orientation  
Positive to Negative is the right consideration  
One last twist to add to the fun  
These electrons obey the Rule of Hund  
With all number's meaning combine  
My hidden message you shall find

# POLICE REPORT

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<b>Case No: 97241</b>	<b>Suspect: Larry Smith</b>
<b>Date: 02/02/2021</b>	<b>Incident Type: Kidnapping</b>

## **Incident Details:**

The cryptic note outlining the suspects demands has been deciphered and a cash drop was made. At the drop location, a new note was found. The note contains what is believed to be "codes" that may lead to a clue to the victims' whereabouts.

## **Current Investigation:**

The codes contained in the new note must be deciphered quickly to locate and rescue the three children.

# Their Locations

Three naughty kids have places to hide

Solving three puzzles you shall find

Postal codes are hidden in the puzzles

Using chemistry knowledge you won't struggle

The periodic trends are your guides

On a periodic table by your sides

B, P, V are filled in the box  
in an order where electronegativity drops

	3		3		2
--	---	--	---	--	---

Y, W, N are dealing with atom size

They are arranged as the radius rises

	8		1		3
--	---	--	---	--	---

The positioning of C, K, H is not random

An increased of energy to ionize an atom

	2		4		5
--	---	--	---	--	---

**Exhibit D:** Photo of the notes (page 2).

**Description:** A note containing cryptic codes leading to the location of the three victims.

**PRINT VERSION OF NOTE**  
**(Section: Their Locations)**

Three naughty kids have places to hide  
Solving three puzzles you shall find  
Postal codes are hidden in the puzzles  
Using chemistry knowledge, you won't struggle  
The periodic trends are your guides  
On a periodic table by your side

B, P, V are filled in the box  
In an order where electronegativity drops

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--	---	--	---	--	---

Y, W, N are dealing with the atom size  
They are arranged as the radius rises

	8		1		3
--	---	--	---	--	---

The positioning of C, K, H is not random  
An increase of energy to ionize an atom

	2		4		5
--	---	--	---	--	---

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