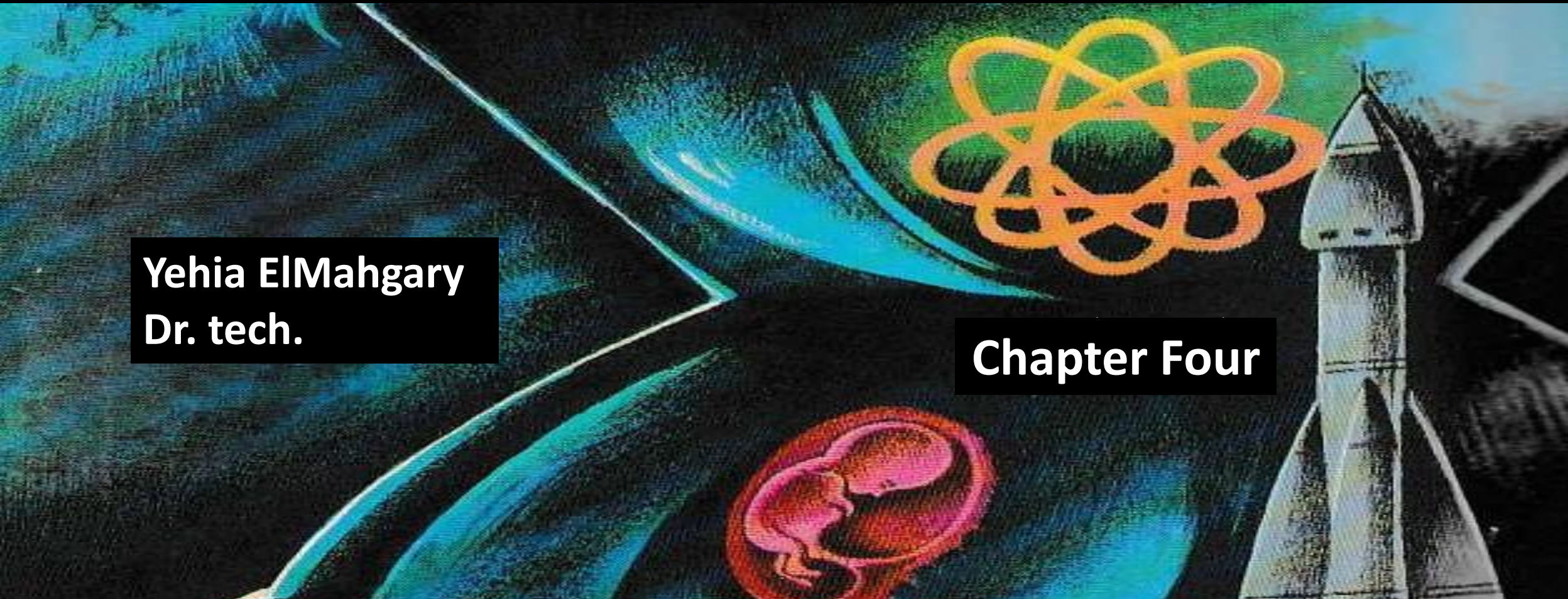


# VERSES OF QUR'AN IN THE NICHE OF SCIENCE

**Yehia ElMahgary**  
**Dr. tech.**

**Chapter Four**

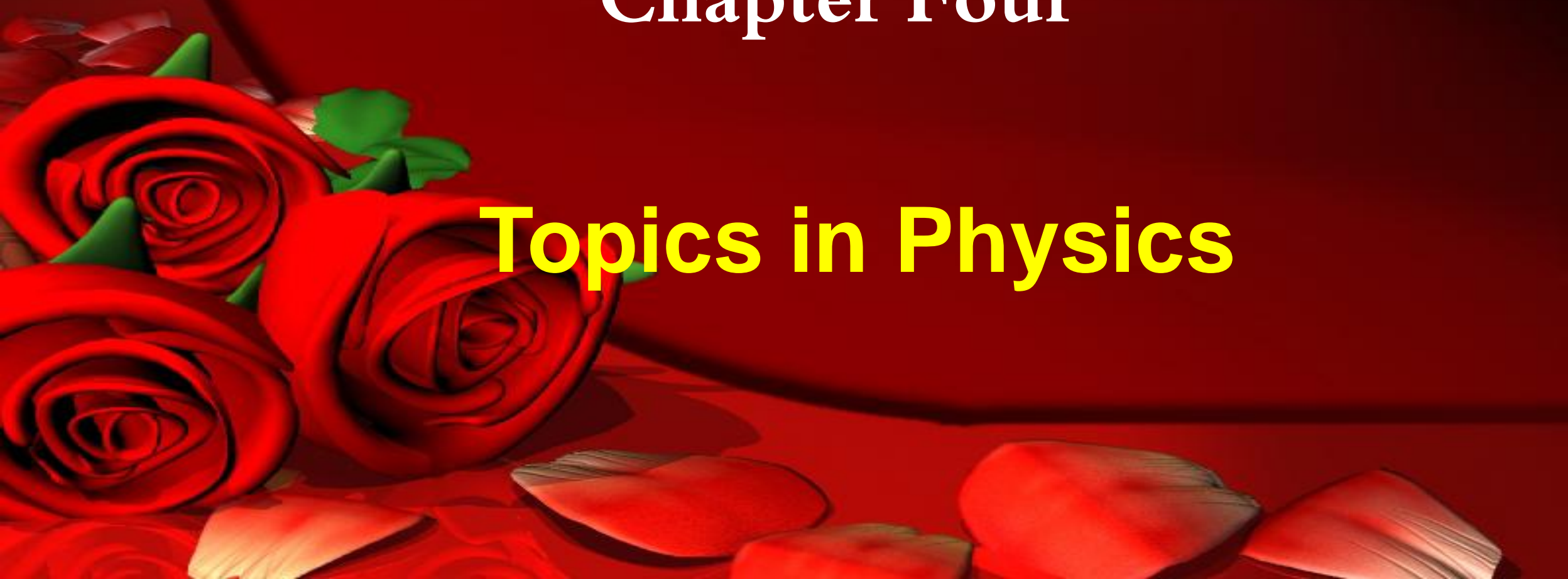


بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ  
رياء

IN THE NAME OF ALLAH THE MOST GRACIOUS THE MOST MERCIFUL

## Chapter Four

# Topics in Physics



# The Verses of Qur'an

تَعْرُجُ الْمَلَائِكَةُ وَالرُّوحُ إِلَيْهِ فِي يَوْمٍ كَانَ مِقْدَارُهُ خَمْسِينَ أَلْفَ سَنَةٍ (المعارج 4)

• “The angels and the soul ascend to Him in a day the measure whereof is fifty thousand years.” (70/4)

قَالَ الَّذِي عِنْدَهُ عِلْمٌ مِّنَ الْكِتَابِ أَنَا آتِيكَ بِهِ قَبْلَ أَنْ يَرْتَدَّ إِلَيْكَ طَرْفُكَ (النمل 40)

• “The one with whom was knowledge of the Scripture said, “I will bring it to you within the twinkling of your eye.” (27/40)

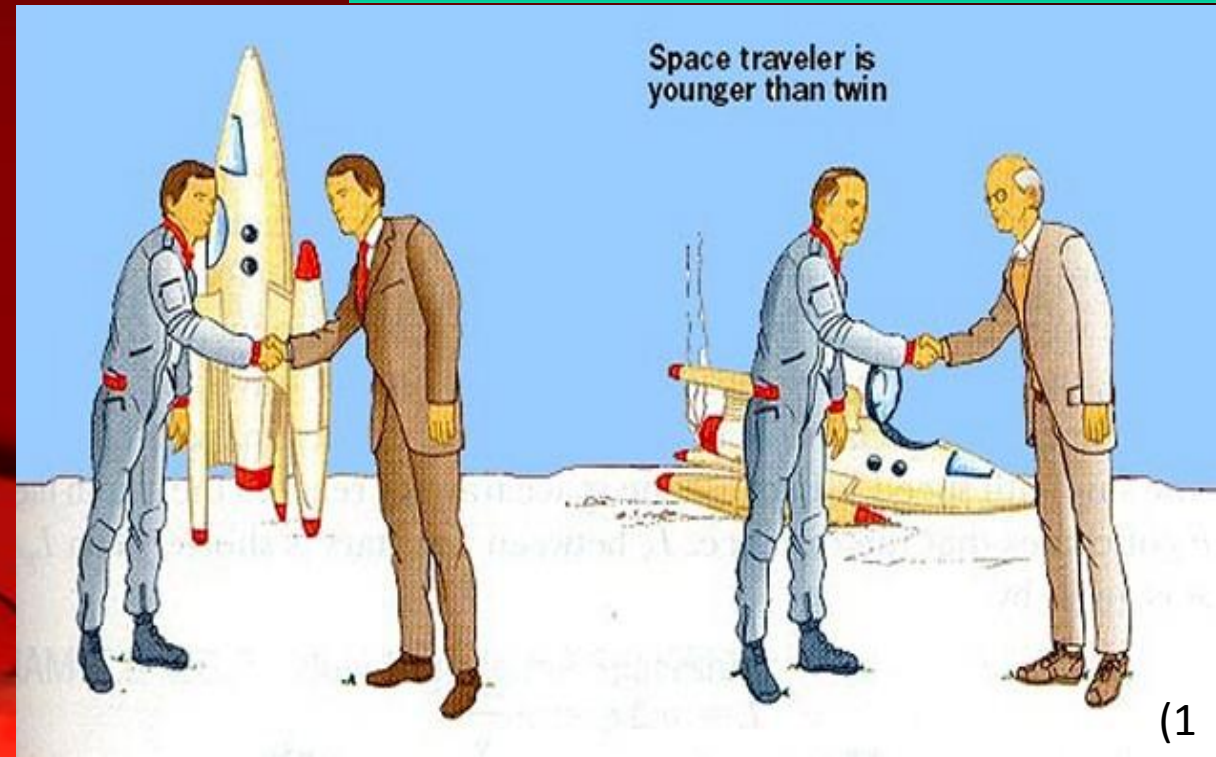
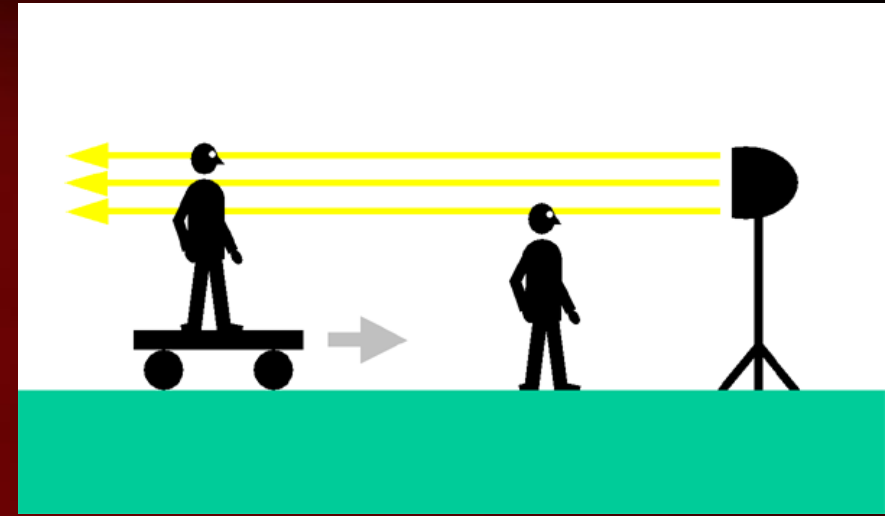
وَمِنْ كُلِّ شَيْءٍ خَلَقْنَا زَوْجَيْنِ لَعَلَّكُمْ تَذَكَّرُونَ (الذاريات 49)

• “And of everything We have created pairs, that you may remember (the Grace of Allah).” (51/49)

# The Relativity of Time

❖ Experiments carried out at the beginning of the last century, all showed that the speed of light 'c' is constant, irrespective of the speed of the body that emits light or that of the observer. According to the special theory of relativity,  $c$  is the upper limit for the speed at which conventional matter, energy or any signal carrying information can travel through space.

❖ In view of the constant speed of light, time became relative and depends on the speed of the moving object. For sufficiently high speeds, one year of travel might correspond to ten years on earth. Hence, the twin paradox: the space traveler will come back after three years to find that his twin brother has become an old man.



تَعْرُجُ الْمَلَائِكَةُ وَالرُّوحُ إِلَيْهِ فِي يَوْمٍ كَانَ مِقْدَارُهُ خَمْسِينَ أَلْفَ سَنَةٍ (المعارج 4)

**“The angels and the soul ascend to Him in a day the measure whereof is fifty thousand years.” (70/4)**

❖ This verse could be understood through the relativity of time, as it tells about the tremendous speed with which the angels and the soul ascend to the Creator. We can even calculate this speed. It is almost the speed of light, i.e., one day of the traveler equals to fifty thousand years on earth.

❖ The relativity of time helps us to understand other verses as well:

“إِنَّهُمْ يَرَوْنَهُ بَعِيدًا ، وَنَرَاهُ قَرِيبًا ، يَوْمَ تَكُونُ السَّمَاءُ كَالْمُهْلِ ، وَتَكُونُ الْجِبَالُ كَالْعِهْنِ ” (المعارج 6 - 7)

**Verily, they see it (torment/day of resurrection) afar of. But We see it quite near.(70/6-7)**

The day of resurrection seems far away for us, and also for those before us, but it seems so close to the Creator. The reason is given in the next verse:

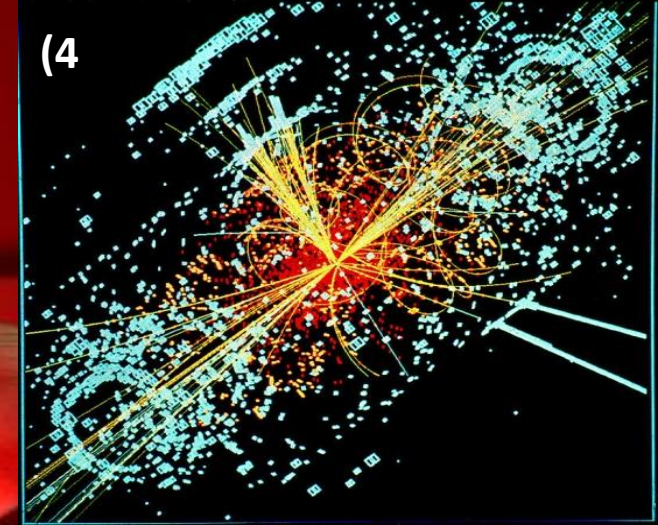
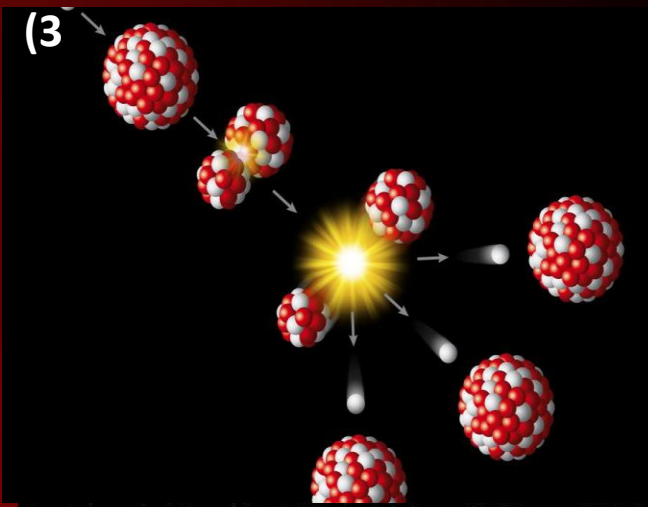
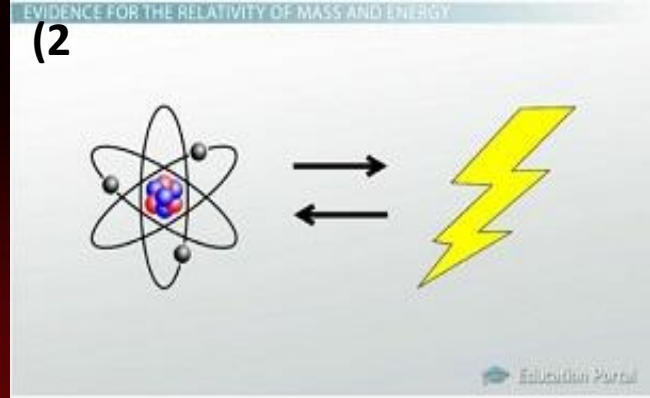
“ وَيَسْتَعْجِلُونَكَ بِالْعَذَابِ وَلَنْ يُخْلِفَ اللَّهُ وَعْدَهُ وَإِنَّ يَوْمًا عِنْدَ رَبِّكَ كَأَلْفِ سَنَةٍ مِّمَّا تَعُدُّونَ ” (الحج 47)

**“And they ask you to hasten on the torment, and Allah fails not His promise. Verily, a day with your Lord is a thousand year of your reckon.” (22/47)**

❖ So the reason is, that a day with the Creator is one thousand years according to our reckon. The verb, ‘they see it’ (it seems to them) gives the sense of the relativity of time.

# Mass & Energy

- ❖ Among the results of the theory of relativity, was the change of the mass of the body as its speed changes . The mass and the speed are now connected by the formula  $E = MC^2$  where E is the energy, M the mass and C is the speed of light. Thus, the mass and energy are transferable, i.e., they become two sides of the same coin.
- ❖ Nuclear fusion and fission result in a mass change,  $\Delta m$ , between the **starting** and end products. The loss of mass produces energy  $E = \Delta m C^2$  Thus, the mass of 1 kg can be converted into an energy of about 25 TWh.
- ❖ On the other hand, energy could be transferred into matter in particle accelerators. This happens with much lower efficiency.
- ❖ Achieving the know-how of transferring matter into energy, and vice versa, with high efficiency, would require great scientific and technological progress. One of the most challenging problems is to re-arrange the atoms and the molecules of the original substance into their exact places before the transformation.



قَالَ الَّذِي عِنْدَهُ عِلْمٌ مِّنَ الْكِتَابِ أَنَا آتِيكَ بِهِ قَبْلَ أَنْ يَرْتَدَّ إِلَيْكَ طَرْفُكَ (النمل 40)

**“The one with whom was knowledge of the Scripture said, “I will bring it to you within the twinkling of your eye.” (27/40)**

❖ The explanation for what the ‘one who has knowledge of the Scripture’ (most probably a Jinn) has done to bring the Throne of Queen Balqis to Suleiman, could be explained as follows:

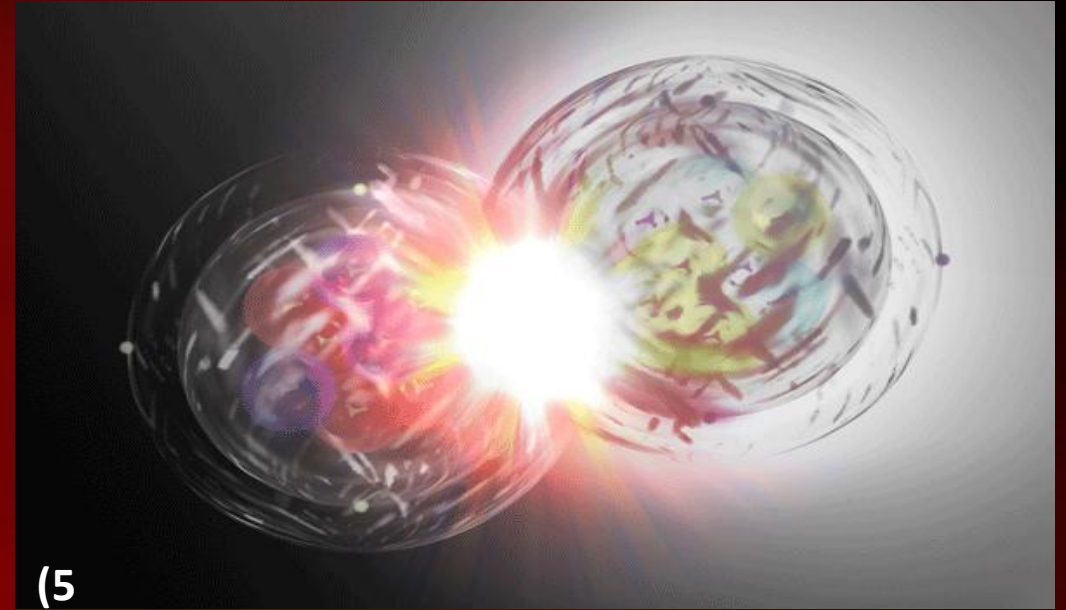
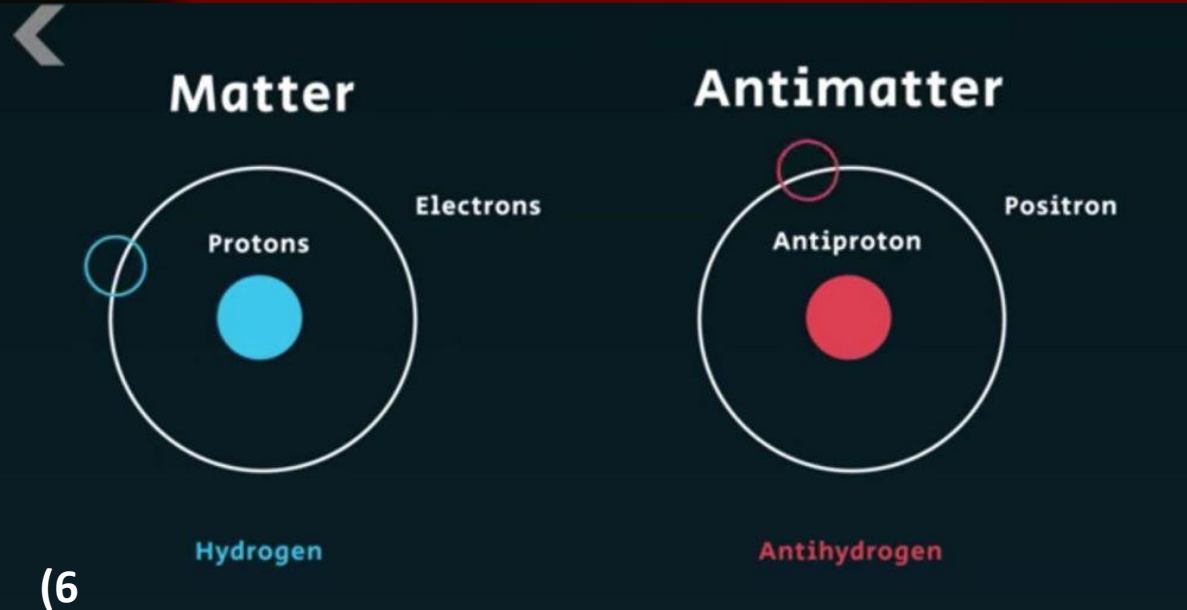
1. He first transferred the throne of Balqis into electric or light energy, which can be sent by electromagnetic waves.
2. He then sent it to Suleiman’s Kingdom with the speed of light (300,000 km/s). The time of its arrival wouldn’t be more than 0.01 seconds, once the distance is about 3000km.
3. After that, he transferred the electromagnetic waves upon their arrival back to matter, so that each particle and atom took the exact place it had before the transformation.

❖ The result was 100%, as the throne was back, to the extent that Suleiman said:

❖ “قَالَ نَكِّرُوا لَهَا عَرْشَهَا نَنْظُرُ أَتَهْتَدِي أَمْ تَكُونُ مِنَ الَّذِينَ لَا يَهْتَدُونَ (النمل 41)

**“He said ‘Disguise her throne to her that we may see whether she will be guided (recognize her throne) or she will be one of those not guided’”. (27/41)** Thus, the technological and scientific level of the Jinn is more advanced than those of the humans of the 21<sup>st</sup> century.

# Antimatter



❖ Traces of an unknown particle were discovered in the 1930s. It appeared that the mass of this particle equaled to the mass of the electron, and that it has a positive charge. Hence, it was called antielectron or positron.

❖ It is now known that for each basic particle of matter, there exists an antiparticle with the same mass, but with the opposite electric charge. The negatively charged electron, has a positively charged antiparticle called the positron. When a particle and its antiparticle come together, they both disappear, quite literally in a flash, as the annihilation process transforms their mass into energy.



وَمِنْ كُلِّ شَيْءٍ خَلَقْنَا زَوْجَيْنِ لَعَلَّكُمْ تَذَكَّرُونَ (الذاريات 49)

“And of everything We have created pairs, that you may remember (the Grace of Allah).”

(51/49)

Matter



Antimatter



❖ God Almighty has created the human, animals and plants in pairs (male and female):

يَا أَيُّهَا النَّاسُ إِنَّا خَلَقْنَاكُمْ مِنْ ذَكَرٍ وَأُنْثَىٰ O mankind! We have created you from male and female. (49/13)

“When Our Command came and water gushed forth, We said embark therein a pair of each kind.” (11/40),

“And of every kind of fruits He made two pairs” (13/3), as male plant is needed to provide pollen to female plant<sup>7)</sup>

❖ The word “everything” in the verse includes inanimate objects too. Hence, matter and antimatter are actually a pair of the inanimate objects.

# Summary of Chapter 4

We considered in the chapter three topics in Physics:

- ❖ First, the relativity of time, i.e., the time depends on the speed of the moving body. As the speed increases, the time relative to the moving body passes slower. We used this fact to explain that the ascending speed of the angels and the soul to the Creator is very close to the speed of light.
- ❖ Second, the conversion of mass to energy, and vice versa. We utilized this in explaining how the Jinn managed to bring Queen Belqis's throne to King Soleiman within the twinkling of his eye.
- ❖ Third, the discovery of antimatter. We show that the "pairs" mentioned in the verse of Qur'an, **"And of everything We have created pairs, that you may remember (the Grace of Allah)"** would include not only humans, animals and plants, but also inanimate objects.

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