



## The Catholic Man Show Season 2, Podcast no. 1

### KEY POINTS

1. The Catholic Man, can you give us a brief definition of what graphene is, for our listeners?
  - a. Graphene, an amazing material that comes from Carbon,
  - b. Though diamonds also come from carbon, we must understand that graphene is carbon with a different atomic structure compared to diamonds.
  - c. Graphene contains many unique properties. It can conduct electricity very well, it can bend, it is very strong... that's what I can say off the top of my head.
  
2. As some listeners may know, Graphene was discovered in 2004 by some scientists from the University of Manchester. Did the Catholic Church react in any way?
  - a. Not in anyway that I am aware of. Any new discovery in Science that is solely for the common good of all is certainly a thumbs up for the Catholic Church.
  - b. The Catechism of the Catholic Church dedicates sections 1905 to 1927 to talk about the common good. I can cut these sections down to the main facts:
    - i. *The common good concerns the life of all.*
    - ii. It is consisted of these three elements:
      1. The common good presupposes respect for the person which means that the rights of human beings are respected.
      2. The common good requires the social well-being and development of the group itself.
      3. Finally the common good requires peace.
    - iii. One of the documents from the Second Vatican Council, *Gaudium et Spes* talks about the common good, saying in section 26, "This social order requires constant improvement. It must be founded on truth, built on justice and animated by love; in freedom it should grow every day toward a more humane balance."
  - c. Does graphene infringe any of these principles? Well, depends on how you use it.
  
3. Based on the Church's teachings, would graphene pose any objections from the Catholic Church?
  - a. Graphene is a very broad subject, it is a material, a substance that can be used to make what you want. You can use it for all sorts of things from phone chips to batteries... I cannot answer that question because we could sit here forever. Is there something made from graphene that the Church would object would be the better question

4. Graphene is lightweight and also a strong material. It is said that bulletproof vests would be a high possibility due to its materials' properties. You have any remarks on this?
  - a. A bullet proof vest is something personally something I would love to have, especially if I were in the states. Though it might protect those who wear the vest, how expensive would it be? Would it be something only the rich could have and the poor would have to suffer? Also, with the graphene vest, would engineers then try to make deadlier weapons? It all goes back to the common good which concerns the life of all. That requires us to look at the wider picture as well. If it would cause a negative impact in the world we live in, then I don't think graphene vests would be the best invention.
  
5. Final question, not really related to graphene specifically, but chemistry in general. Do you think chemistry has anything to do with the Catholic faith? Or does the chemistry just make Catholicism seem like a joke? Take the doctrine of transubstantiation as an example, after the words of consecration, Catholics believe that the bread and wine contain the actual presence of Christ. However, if it were looked under a microscope, how would it look like?
  - a. The *accident* would remain the same, the appearance of bread and wine. But the actual *substance* would not. After the consecration, the body and wine is TRUE body and blood of Christ.
    - i. The doctrine of transubstantiation is not accepted in many Christian denominations, in which they believe that the bread and wine are only *representations*.
  - b. Science cannot prove everything. "I only believe in things that can be proven by science". The statement itself cannot be proved by science.
  - c. The power of God is beyond science.
  
6. You just mentioned the common statement from some atheists and relativists, "I only believe in things that can be proven by science" and you said that that statement is wrong. It is common to hear that the "Catholic Church is an enemy of science" evident through the Galileo incident in which he was sent to house arrest. But is that true?
  - a. Certainly not. The Church had made mistakes. But no, it is not against scientific discoveries because when you dig deeper into science, you can see the beauty and power of God. Take the example of Carbon molecules as an example. You see how when the bonds are rearranged, it creates a totally different material ranging from diamonds, charcoal and graphene? It is simply fascinating. But who allowed this rearrangement? The Creator, God!
  - b. But that is not evident only in 21<sup>st</sup> century. Way back in the 1960s, when the first man landed on the moon, Blessed Pope Paul VI was one of the first people to greet Neil Armstrong on the moon. Paul VI was very open to science. Fast forward to today, it is said the Jorje Mario Bergoglio, you know him? Pope Francis! Was a chemist before he entered seminary.
  - c. Did you know that the church even has scientists? Br. Guy Consolmagno, a Jesuit brother is the head of the Vatican Observatory.