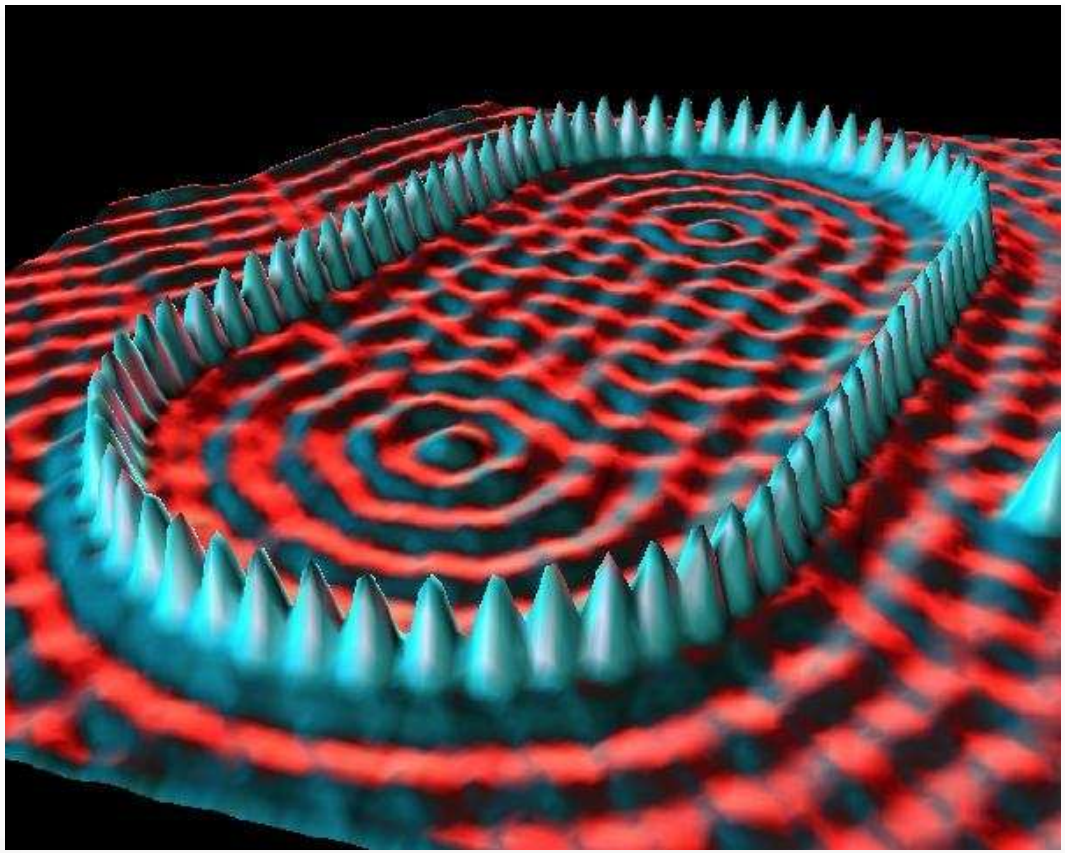
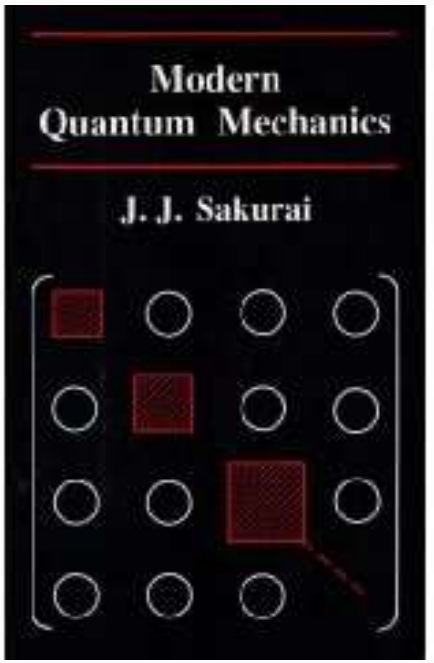
بسم الله الرحمن الرحیم

با نام و یاد خداوند متعال و با استعانت از حضرت حق

شروع نیمسال تحصیلی دوم بر شما شما دانشجویان محترم مبارک باد

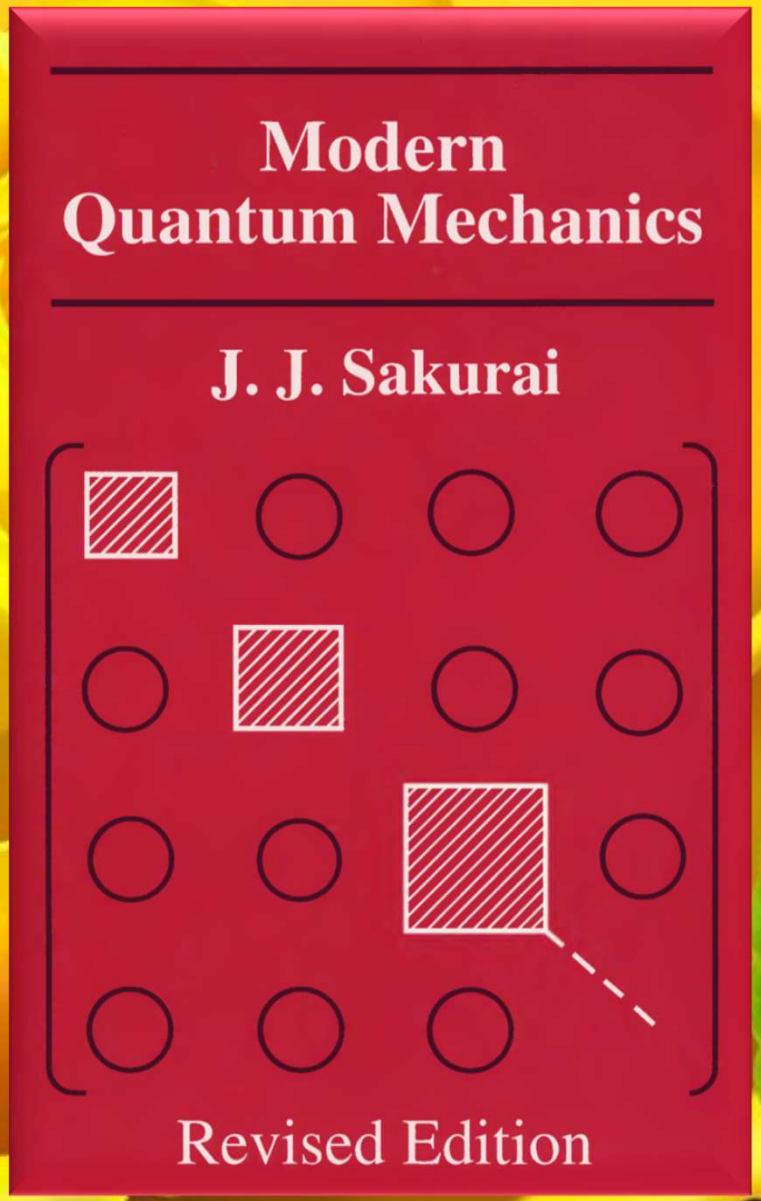


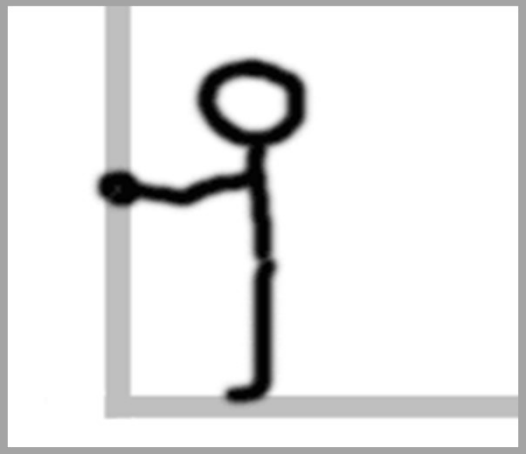


References:

1) J. J. Sakurai, Modern Quantum Mechanics, (1994).
2) Leslie E. Ballentine , Quantum Mechanics A Modern Development, (2000).
3) P. W. Atkins and R. S. Friedman, Molecular Quantum Mechanics, (2000).
4) Quantum Mechanics (2 vol. set) , Claude Cohen-Tannoudji, Bernard Diu, Frank Laloe , (1977) .
5) L. I. Schiff, Quantum Mechanics, (1968).
6) E. Merzbacher, Quantum Mechanics, (1968).
7) Consistent Quantum Theory, Robert B. Griffiths, (2003).
8) Stephen Gasiorowicz, Quantum Physics, first (1974) and third editions (2003).
9) J. L. Powell and B. Crasemann, Quantum Mechanics, (1961).
10) R. Shankar, Quantum Mechanics, (1980).

Main Reference





Homework

You would give me your homework per week at my office **not in class or under my door**.

You can work with others on homework (I encourage you to do so!), but write it yourself.

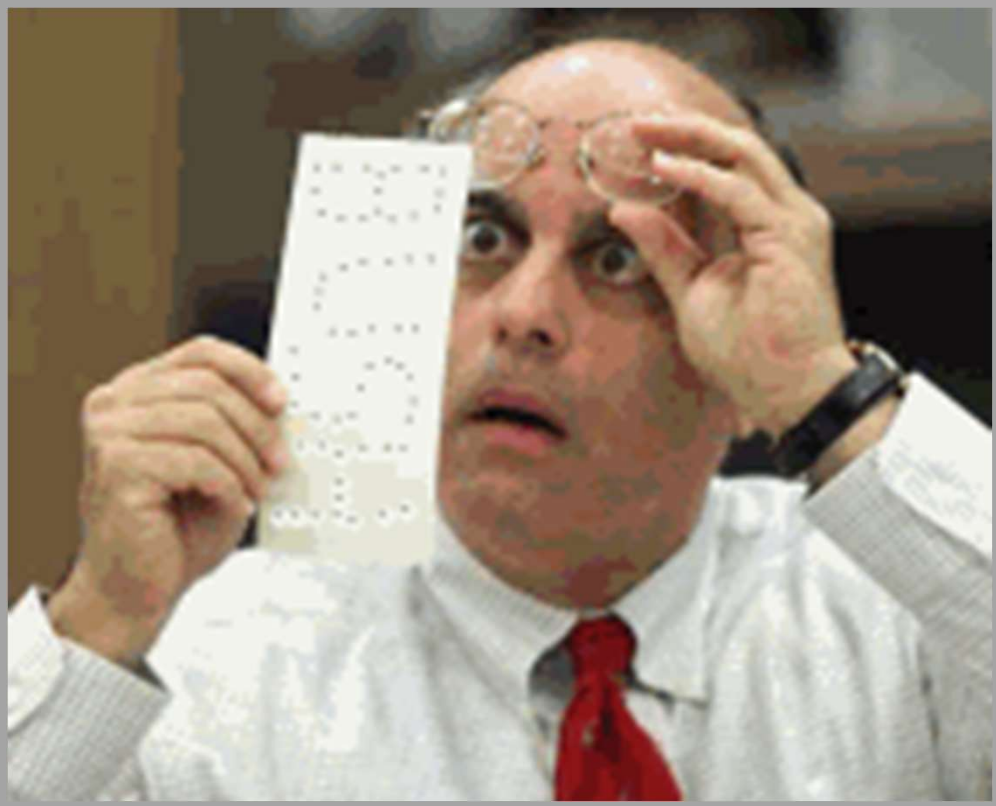
The Importance of Having Class

You should come to the class because your score depends on your presence.

In the past, people who have skipped a lot of classes have received very bad grades. Conversely, people who've come to all of the classes nearly always receive good scores.

Understanding the ideas of each lecture requires the knowledge of the previous lectures.

If you keep up, you won't end up looking like this the night before the exams!



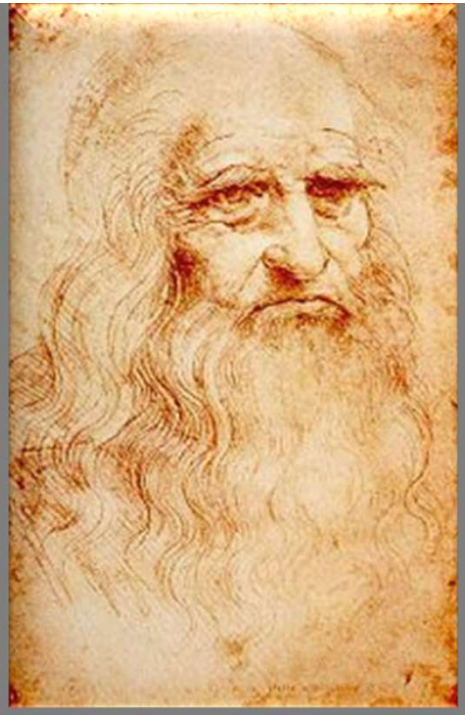
Evaluation Procedure:

Midterm (30% or 25%) + Final (30% or 35%) + Solving Problems of Chapters (10%) +Activity in Class (10%) + Homework (10%) + Presentation (10%).

تاریخ امتحان

میان ترم : شنبه 91/01/26 ساعت 8 تا 10 کلاس 9

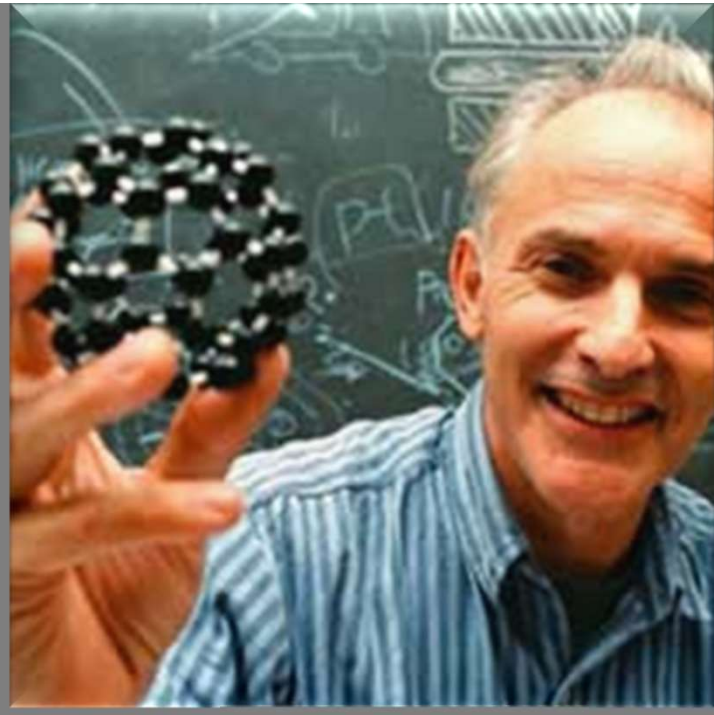
پایان ترم : یک شنبه 91/03/28 ساعت 9 تا 12 کلاس 8



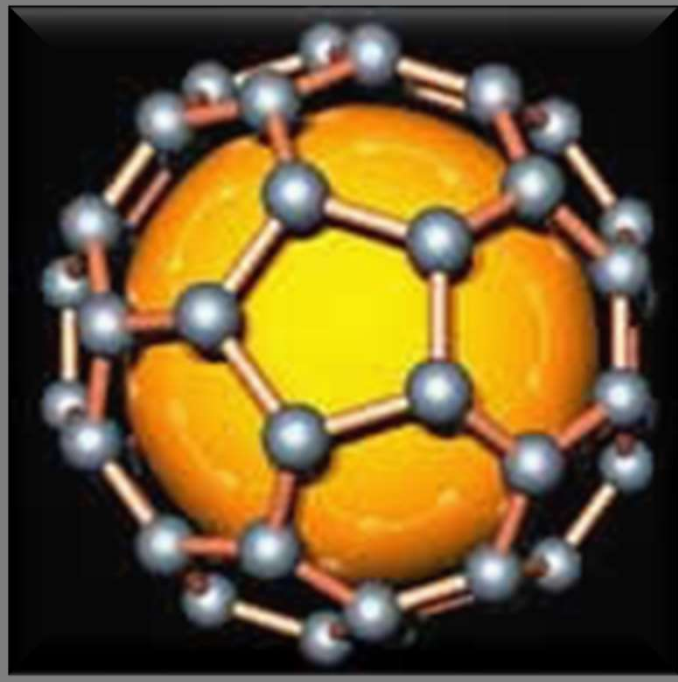
Leonardo da Vinci
1452 (Italy)-1519 (France)

Richard Buckminster fuller

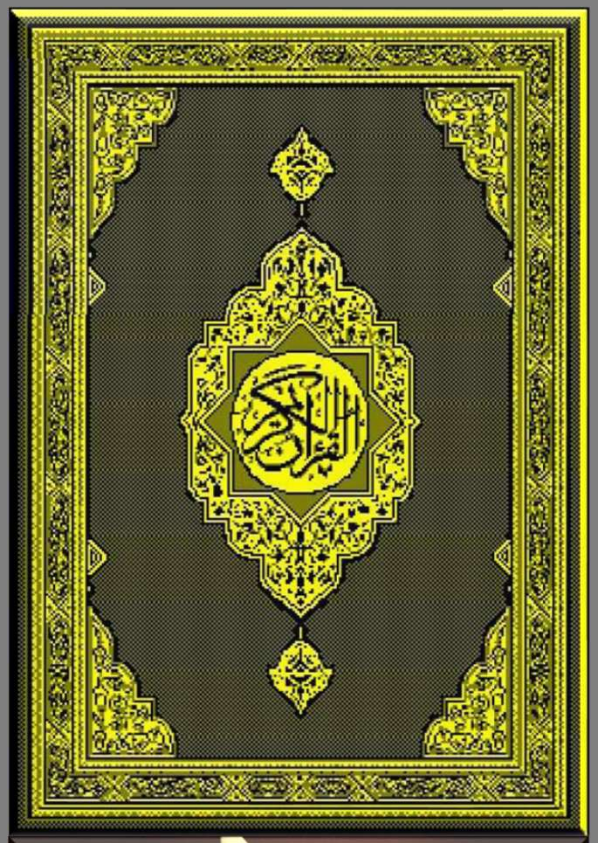
1895-1983



Harry Kroto, 1939

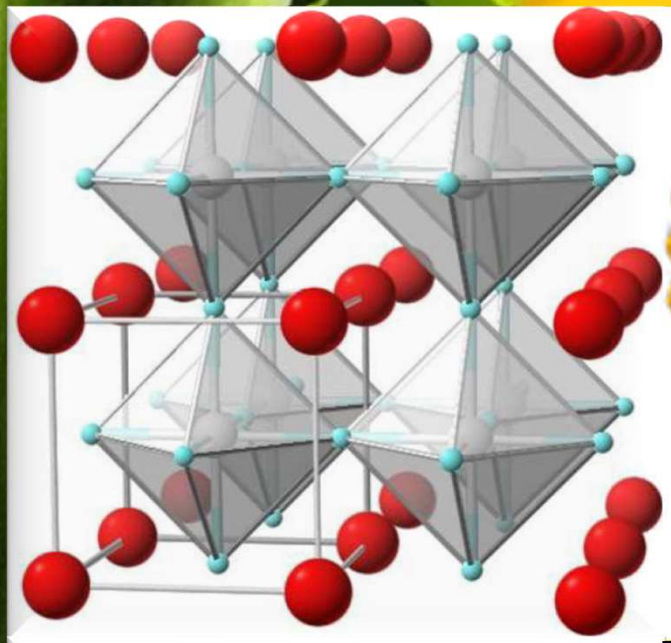


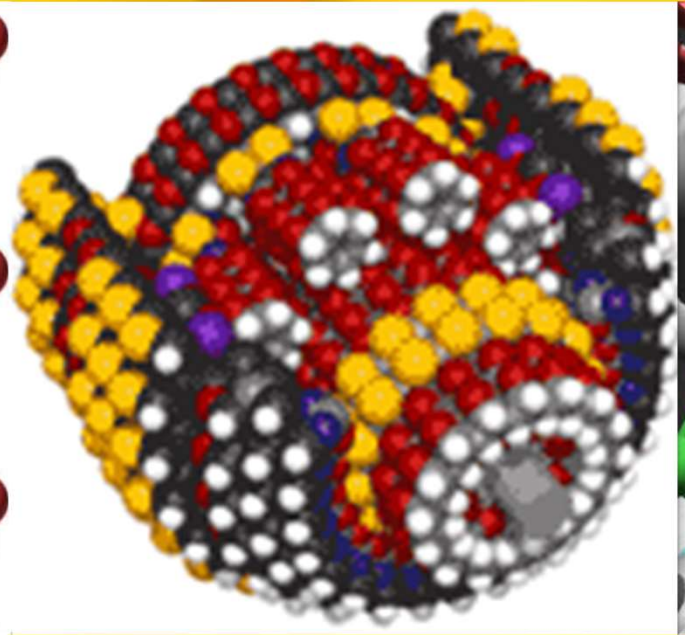
Al-Rad Sura of Quran
In the name of Allah, the Beneficent, the Merciful

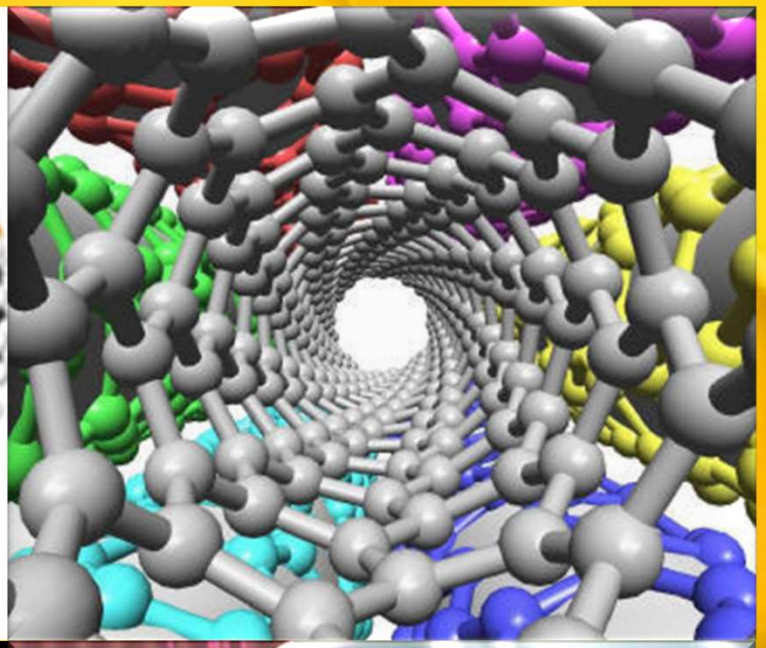


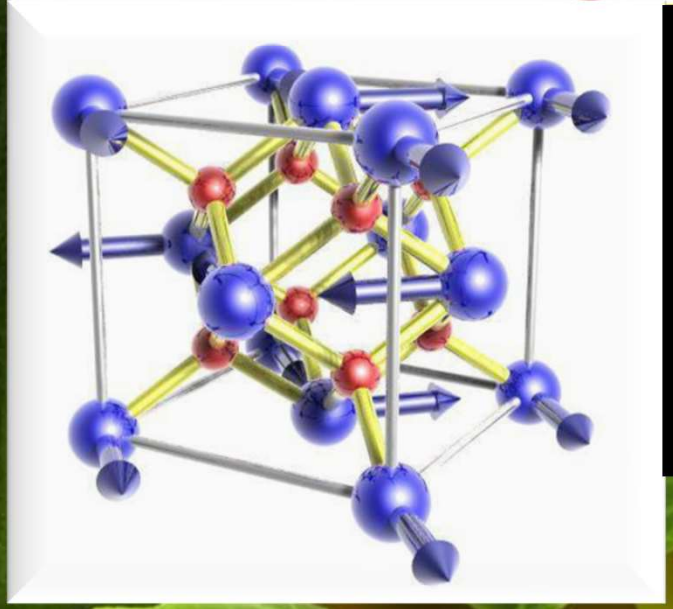
ٱللَّهُ ٱلَّذِى رَفَعَ ٱلسَّمَٰوَٰتِ بِغَيرِ
عَمَدٍ تَرَونَهَا ثُمَّ ٱستَوَىٰ عَلَى
ٱلعَرشِ وَسَخَّرَ ٱلشَّمسَ وَٱلقَمَرَ
كُلٌّ يَجرِى لِأَجَلٍ مُّسَمًّى يُدَبِّرُ
ٱلأَمرَ يُفَصِّلُ ٱلأَيَٰتِ لَعَلَّكُم
بِلِقَاءِ رَبِّكُم تُوقِنُونَ (2)

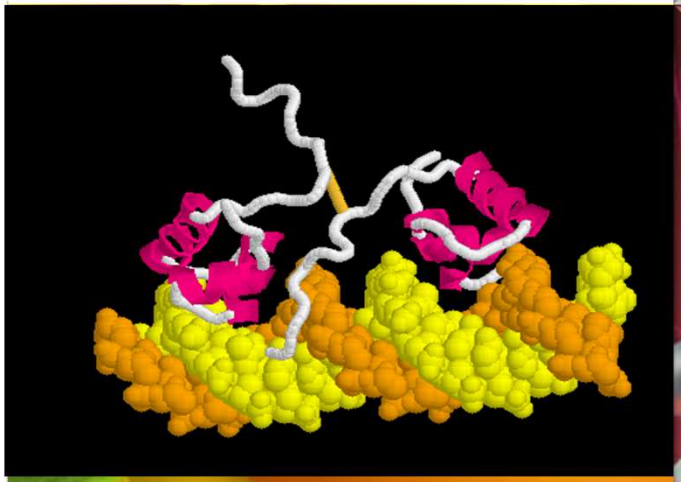
Allah it is who raised up the universe without visible supports, then mounted the Throne, and compelled the sun and the moon to be of service, each runneth unto an appointed term; He ordereth the course; He detaileth the revelations, that haply ye may be certain of the meeting with your Lord. (2)

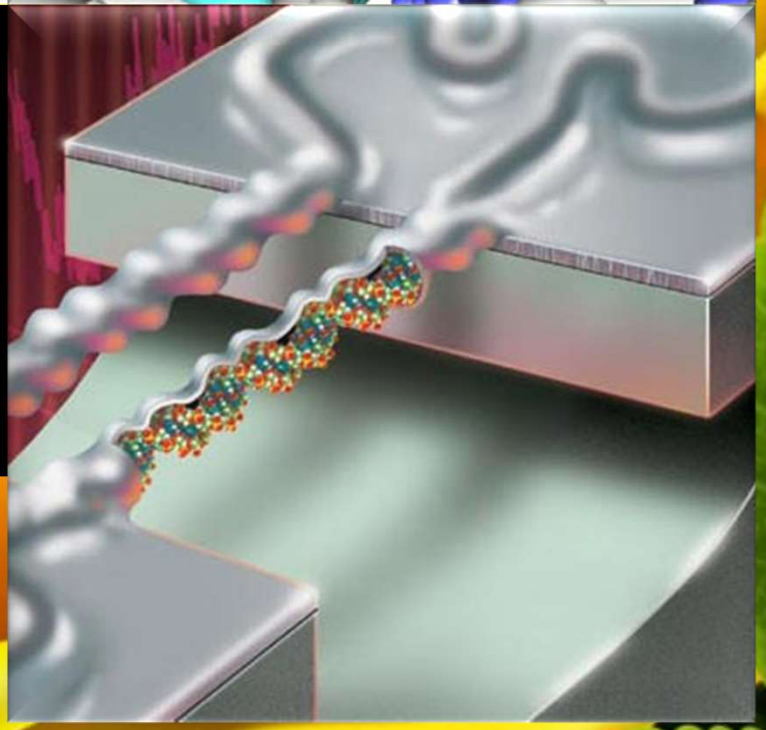


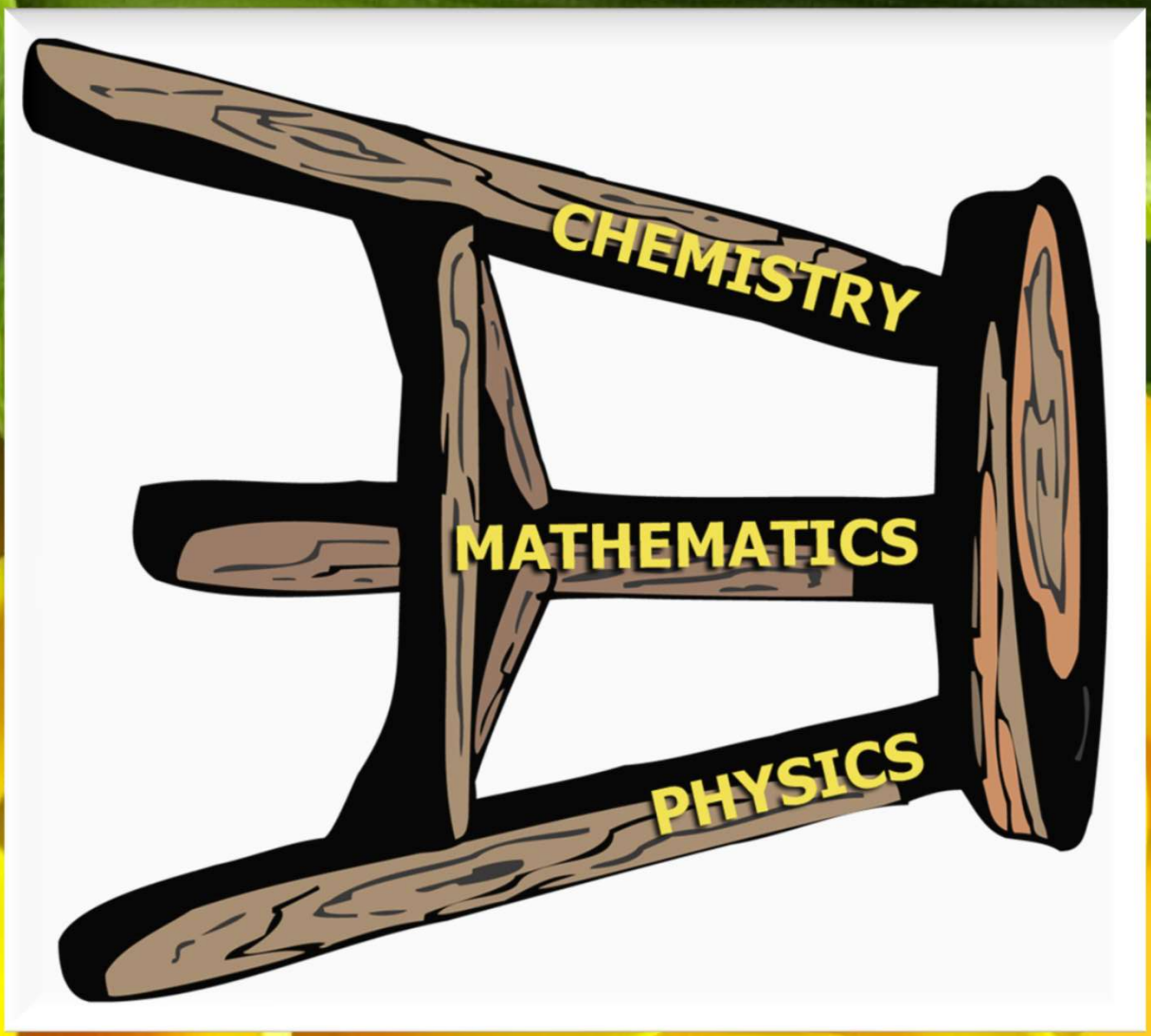


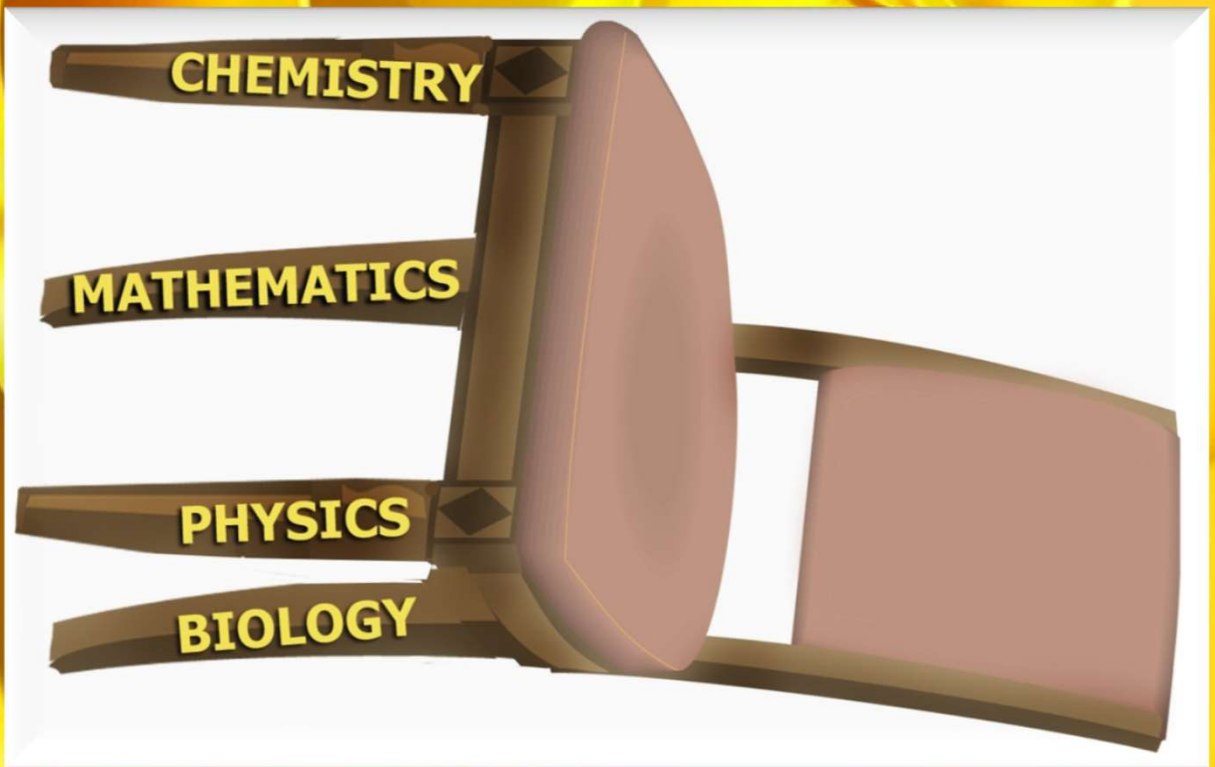








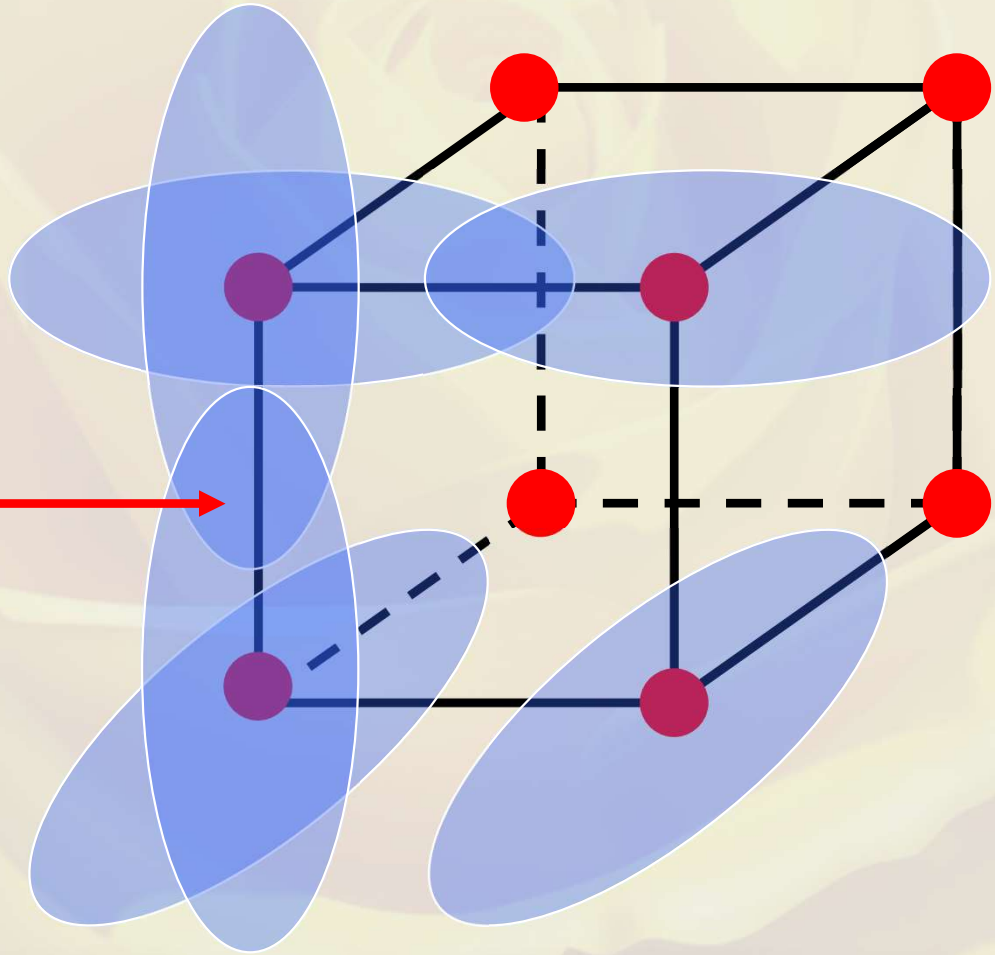

CHEMISTRY
MATHEMATICS
PHYSICS

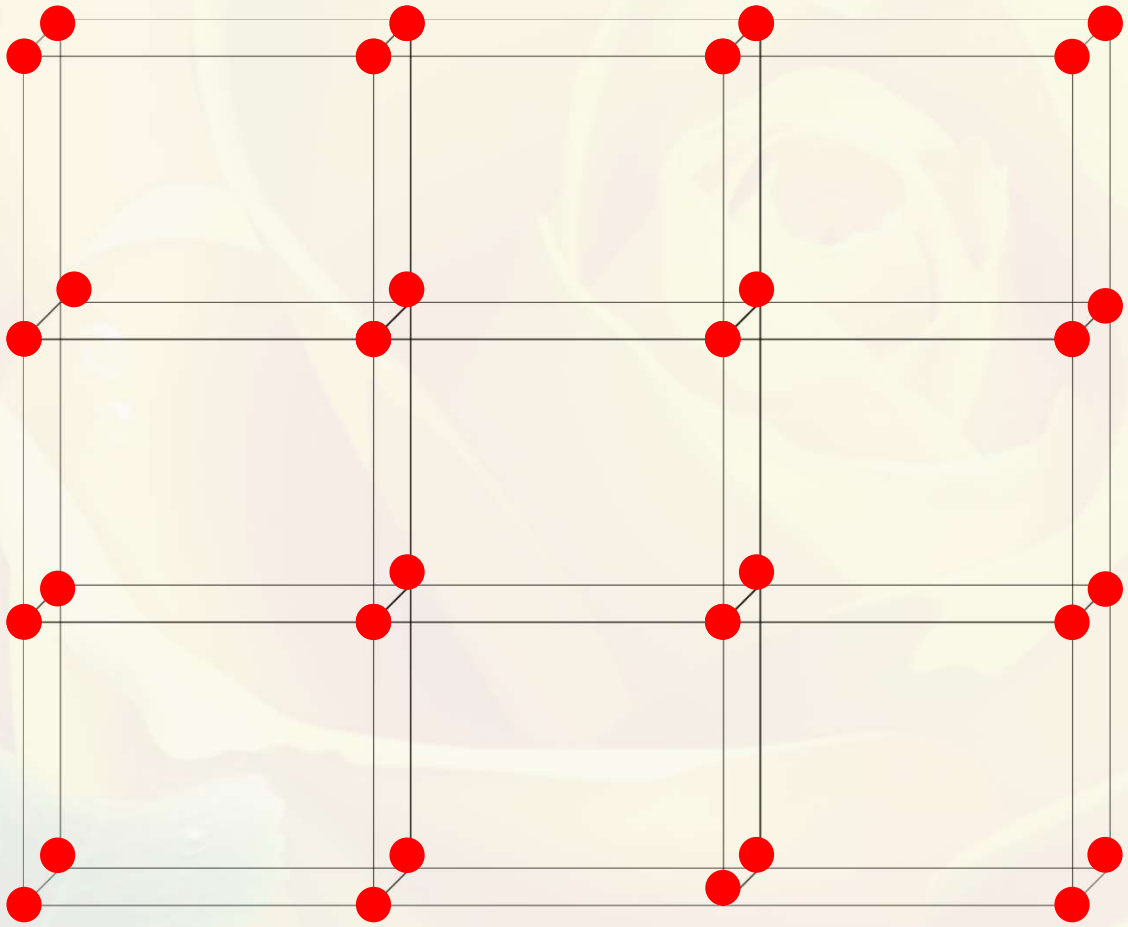

CHEMISTRY
MATHEMATICS
PHYSICS
BIOLOGY

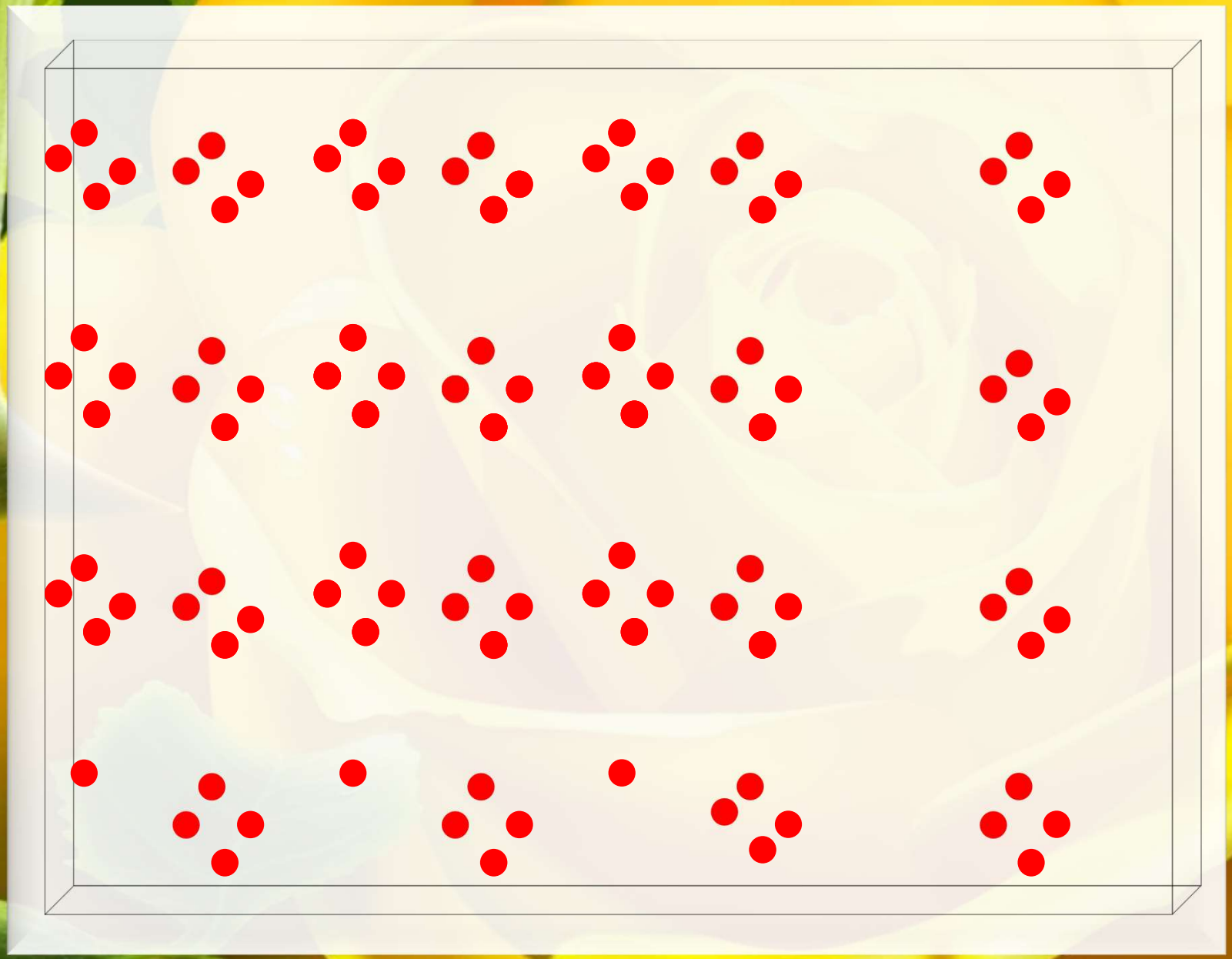
The classical ideal gas

$$H\Psi = E\Psi$$

$$H = T + V$$

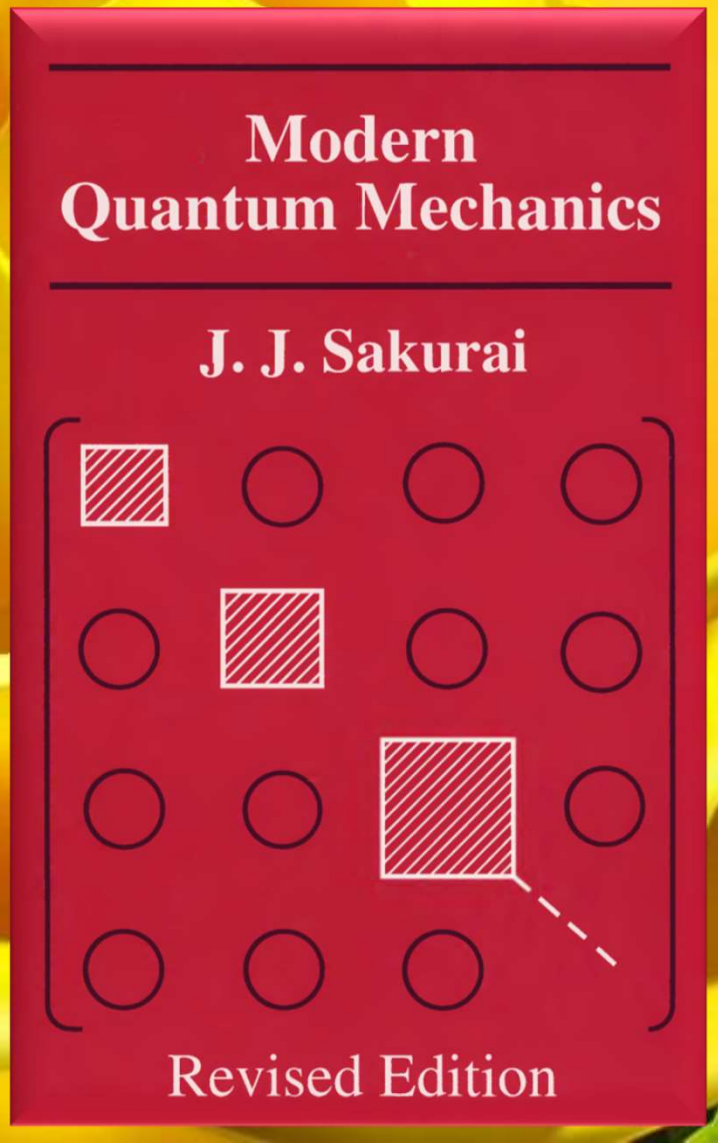






Modern Quantum Mechanics

J. J. Sakuri (1933-1982)



What we will learn

Modern Quantum Mechanics I

1) FUNDAMENTAL CONCEPTS

2) QUANTUM DYNAMICS

3) THEORY OF ANGULAR MOMENTUM

Modern Quantum Mechanics II

4) SYMMETRY IN QUANTUM MECHANICS

5) APPROXIMATION METHODS

6) IDENTICAL PARTICLES

7) SCATTERING THEORY