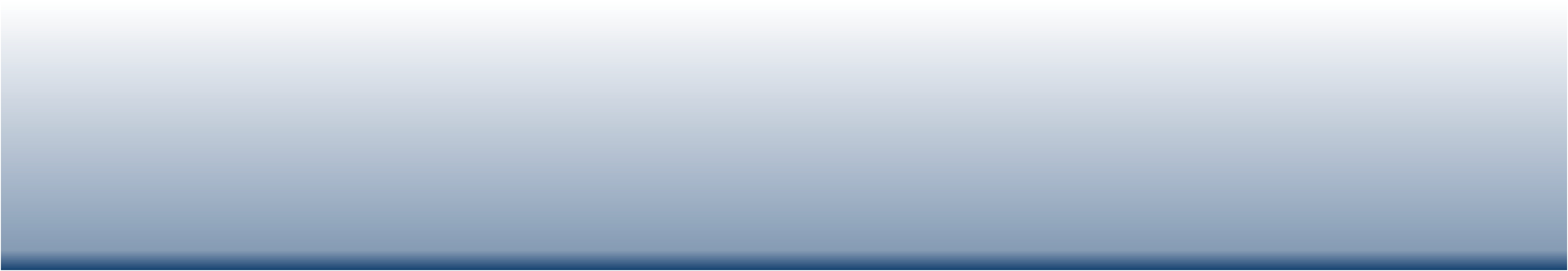


Image credit: Argonne  
National Laboratory









- ❖ Condensed matter & quantum many-body systems
- ❖ Simulating atomic/molecular structure (chemistry)
- ❖ Understanding the structure of proton (nuclear physics)

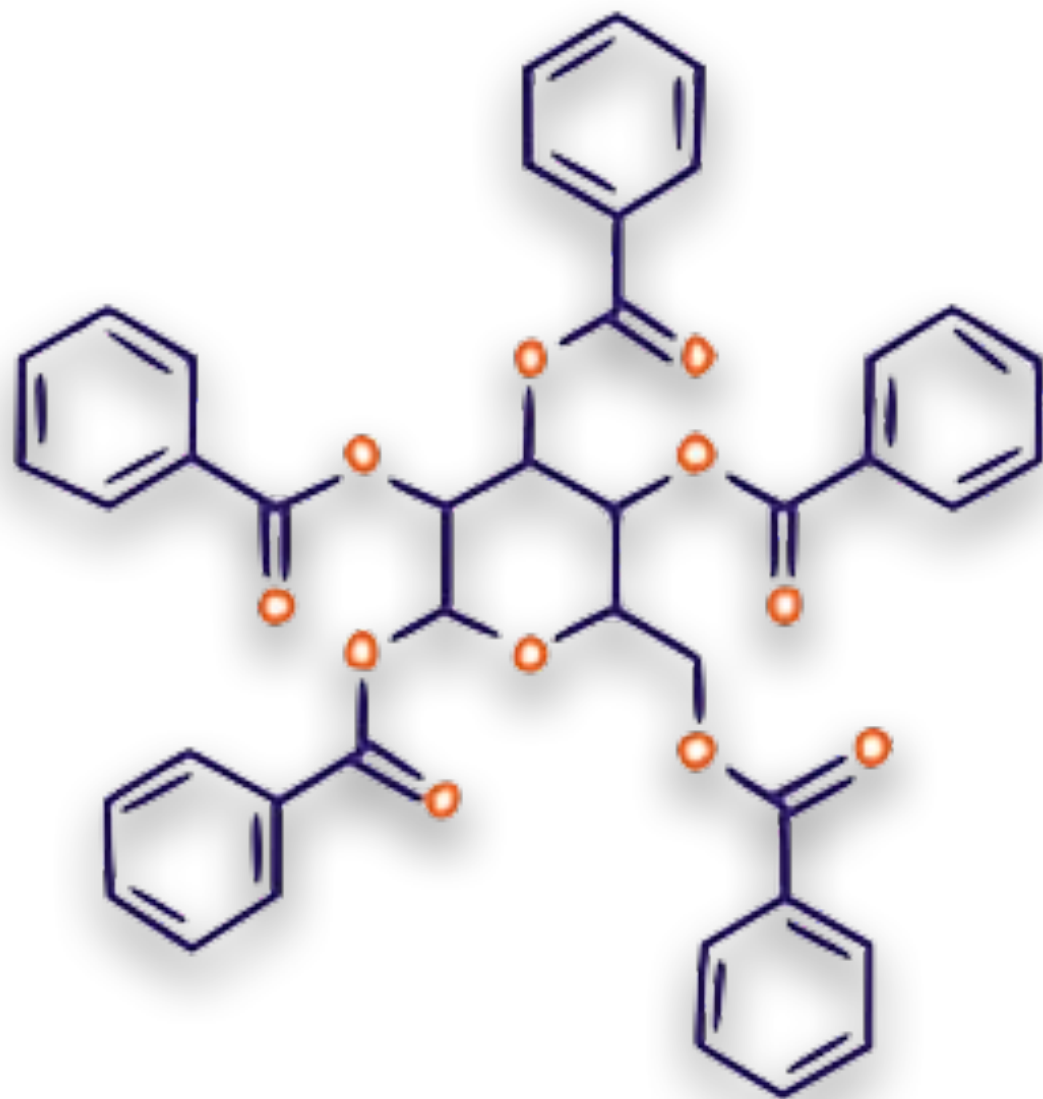
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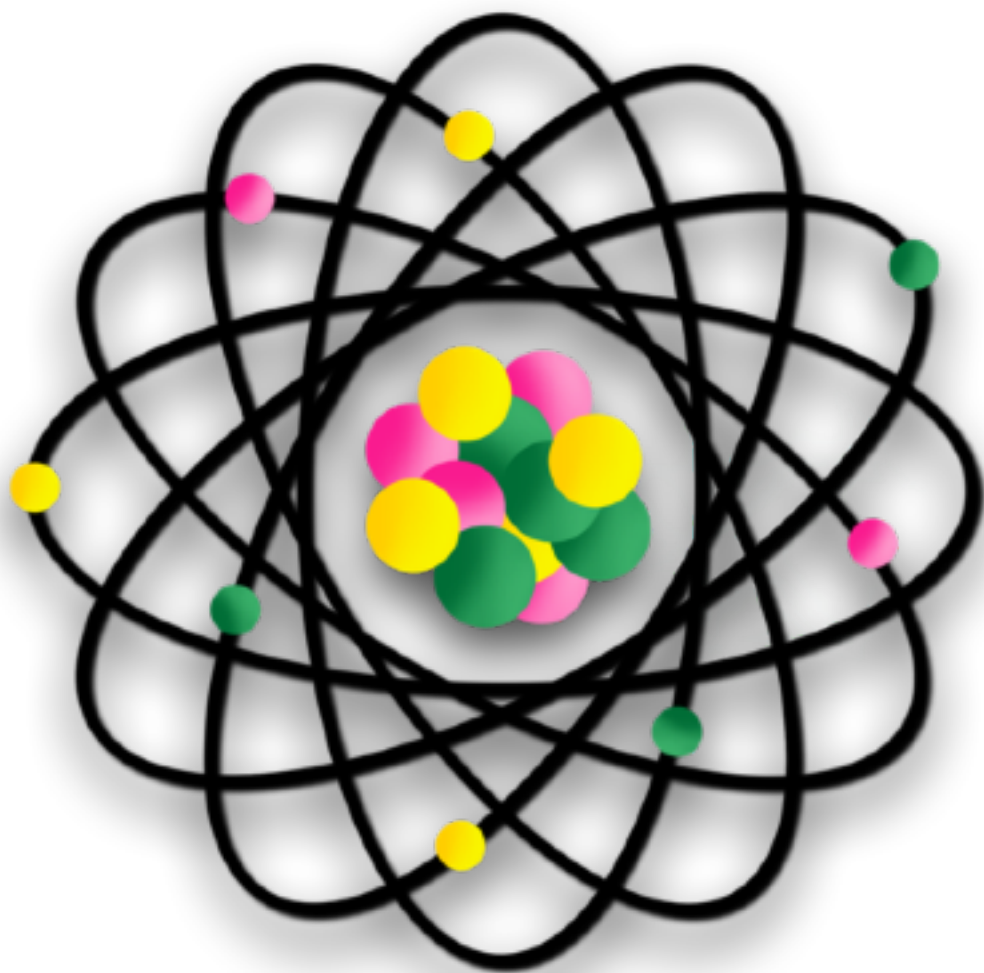
16

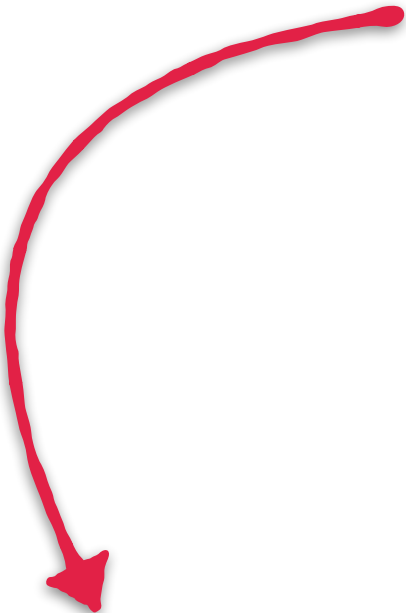














## Classical Methods

- ✦ Exact diagonalisation
- ✦ Monte Carlo
- ✦ Tensor Networks

## Why QML?

- ◆ The main goal is to study physics
- ◆ Efficient way of preparing quantum systems



And many more...



Condensed matter & quantum

many-body systems



Simulating atomic/molecular



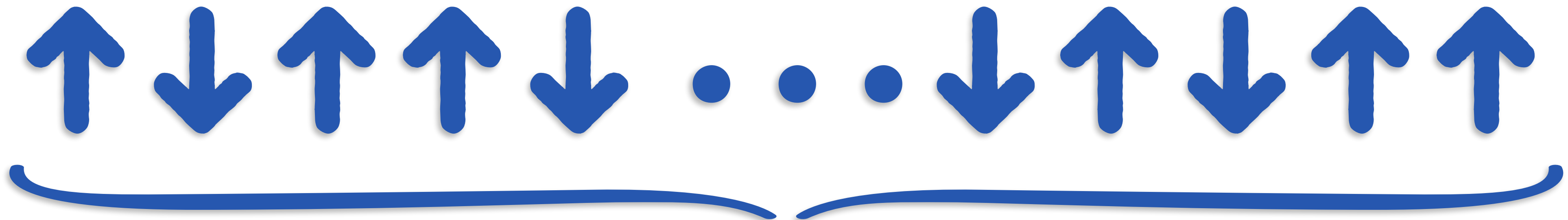
# Understanding the structure of

structure (chemistry)

proton(nuclear physics)

John. A. A. A.





System of electrons with  
spin up or down

What's its natural form?













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