

## Concerning soft matter

- C3: Statistical Physics (deals with polymers)
- C5: Low Temperature Physics
- C6: Biological Physics
- C8: Semiconductors
- C9: Magnetism
- C10: Structure and Dynamics of Condensed Matter
- C18: Mathematical Physics
- C20: Computational Physics

### **C3 mandate includes:**

*To promote the exchange of information and views among the members of the international scientific community in the general field of Statistical Physics including:*

- a. Statistical and thermodynamic methods concerning the static and dynamic properties of mesoscopic and macroscopic states of matter;
- b. Applications of statistical physics to related fields and non-linear dynamics, turbulence, chemical kinetics, polymers, colloids, liquid crystals, non-crystalline solids, heterogeneous media, neural networks and computational physics.

### **C5 mandate includes:**

To promote the exchange of information and views among the members of the international scientific community in the general field of Low Temperature Physics including:

1. the low temperature properties of solids, particularly those that only manifest themselves at low temperatures;
2. quantum solids and liquids, particularly of the lightest elements;
3. the basic mechanisms and physics of superconductivity;
4. low temperature techniques;
5. practical applications of low temperatures physics

### **C6 mandate includes:**

To promote the exchange of information and views among the members of the international scientific community in the general field of Biological Physics. Biological Physics deals with the concepts and laws that underlie the structure and function of biological systems. Scientific activities in Biological Physics include experimental, theoretical, and computational studies of biomolecules and other biological systems of interest to physicists.

### **C8 mandate includes:**

To promote the exchange of information and views among the members of the international scientific community in the general field of Semiconductor Physics including:

1. electronic states, lattice dynamics and properties of matter in bulk, at surfaces and interfaces, and in systems or reduced dimensionality (in collaboration with other commissions as appropriate);

2. defects, imperfections, impurities and amorphous semiconductors;
3. application of semiconductor physics to technology.

### **C9 mandate from the old website**

To promote the exchange of information and views among the members of the international scientific community in the general field of Magnetism including:

- a. phenomena which result in the determination of magnetic interactions at the atomic level;
- b. magnetic properties of matter including reduced dimensionality systems (in collaboration with other commissions as appropriate);
- c. technical applications of magnetic materials and generation of magnetic fields.

### **C10 mandate includes**

To promote the exchange of information and views among the members of the international scientific community in the general field of Condensed Matter Physics including:

1. the properties and behaviour of atoms and molecules in the liquid and solid states;
2. the characteristics of the solid and liquid states of matter including reduced dimensionality systems (in collaboration with other commissions as appropriate);
3. the modelling of condensed matter;
4. the application of condensed matter physics to technology.

### **C18 mandate includes**

To promote the exchange of information and views among the members of the international scientific community in the general field of Mathematical studies of problems originating in or relevant to Physics, including:

- a. mathematical models of physical systems;
- b. mathematical aspects of physical theories;
- c. computational techniques.

### **C20 mandate includes**

To promote the exchange of information and views among the members of the international community of physicists in the area of Computational studies of problems originating in or relevant to physics, including:

1. numerical and symbolic models and algorithms for the simulation of physical systems
2. computational control and data processing of experiments
3. programming and computational environments
4. the physical basis of computer machinery.