

Rheology of blood cells, capsules, and vesicles

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This special issue is addressed to the rheology of suspensions of soft particles, such as blood cells, capsules, and vesicles. This is a subject of growing scientific interest, especially in the biomedical area. All the papers collected in the special issue are indeed relevant for the flow behavior of blood, which can be considered as a suspension of red blood cells as far as rheological properties are concerned. Both computational and experimental contributions are included in the issue, with a range of topics such as confined flow of model capsule suspensions, platelet

margination and near wall dynamics, blood linear viscoelasticity, and vesicle dynamics under shear flow. Furthermore, hemodynamic and hemorheological features of red blood cells in diseases such as malaria and sickle cell anemia and the effects of dextran, cholesterol, and triglycerides on blood rheology are also investigated. The state of the art emerging from this special issue outlines a dynamic research field, where the ongoing work provides exciting challenges and perspectives for future developments in the arena of the rheology of complex biological fluids.

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