BlenDaViz

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\[ t = 50 \]
Data to Image

Data

Post Processing

Filters

Geometry

Rendering

Image

0111000111010101001101 (bfield.vtk)

\[ B^2 = \vec{B} \cdot \vec{B} \]

\[ B^2 = [0.1, 0.2, 0.3] \]
Paraview
Vapor
Pros and Cons

- Read many data formats.
- Read geometry data.
- Most common filters.
- Limited and slow post-processing.
- Poor animation options.
- Unrealistic look.
- Very limited light/shading options.
What Makes a Realistic Look?
Blender
Blender

- **SUB-SURFACE SCATTERING**
- **REFRACTION**
- **DIRECT REFLECTION**
- **DIFFUSE REFLECTION**
Blender
Pros and Cons

🌟 Great and realistic graphics.
🌟 Realistic shaders, materials and lighting.
🌟 Easy and powerful animations.

☁️ No data import (except geometry and lights and materials).
☁️ No filters.
☁️ No postprocessing.
Blender and Visualization
Blender and Visualization

Gold Nanoparticle

Antibody

Albumin

Iron Oxide Nanoparticle

Peptide

Salicylic Acid

Dimensions:
- Gold Nanoparticle: 20 units
- Antibody: 11 units
- Albumin: 7 units
- Iron Oxide Nanoparticle: 5 units
- Peptide: ~1 unit
- Salicylic Acid: 0.5 unit
Blender and Visualization

www.co-de-it.com

DUAL MESH

TISSUE
add-on

blender
Blender and Visualization
Blender and Visualization
Blender and Visualization
Blender and Visualization
BlenDaViz

github.com/SimonCan/BlenDaViz
\[ t = 500 \]
BlenDaViz

- Quick and intuitively to use.
- Everything possible through console.
- Object oriented.
- Group plot geometry into one blender object.
Outlook

- Axis and bounding boxes.
- Labels and annotations (LaTeX).
- Automatic camera and lights.
- Volume rendering.
- Iso surfaces.
- Streamlines
- Time integration.