Supplementary Information

Peristaltically induced pulsating flow of nanofluid in an inclined porous space

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Table S1 — Thermophysical properties of nanofluid (See Refs. [21][23])	
Property	Expression
Density	$\rho_{nf} = (1-\varphi)\rho_f + \varphi\,\rho_{fs}$
Dynamic viscosity	$\mu_{nf} = \mu_f(1-\varphi)^{2.5}$
Thermal conductivity	$K_{nf} = K_s \frac{K_f + (m-1)K_s - (m-1)\varphi(K_f - K_s)}{K_s + (m-1)K_f + \varphi(K_f - K_s)}$
Heat capacity	$(\rho C_p)_{nf} = (1-\varphi)(\rho C_p)_f + \varphi(\rho C_p)_s$
Electrical conductivity	$\sigma_{nf} = \sigma_s \frac{\sigma_f + (m-1)\sigma_s - (m-1)\varphi(\sigma_f - \sigma_s)}{\sigma_s + (m-1)\sigma_f + \varphi(\sigma_f - \sigma_s)}$

Table S2 — Thermophysical properties of blood, water, kerosene, and nanoparticles (See Refs. [21] [24])					
Physical Properties	Blood	Water	Kerosene	Gold	Silver
Density ρ (kg/m^3)	1063	997.1	783	19300	10500

Specific heat Cp (*J/Kg K*)	3594	4179	2090	129	235
Thermal conductivity *K* (*W/m K*)	0.492	0.613	0.149	318	429
Electrical conductivity $\sigma(\Omega^{-1}m^{-1})$	0.667	5.0× 10^-2	6 ×10⁻10	4.10× 10^6	6.30 × 10^7
Thermal expansion β (1/k)	1.8×10^{-4}	2.1× 10^-4	9.5× 10^-4	1.4×10^{-5}	1.89×10^{-5}

Table S3 — Shape factor values for the different shapes (see Refs. [24][25][27])

S. No.	Nanoparticle type	Shape	Shape factor
1.	Cylinder		4.9
2.	Column		6.36
3.	Blade		8.6
4.	Lamina		16.1576