

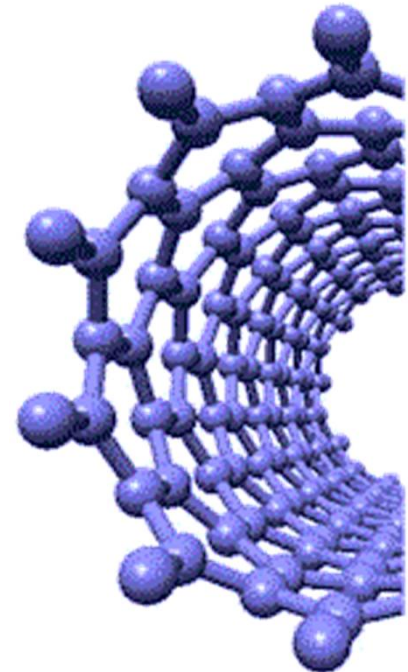


INVESTICE DO ROZVOJE VZDĚLÁVÁNÍ

Inovace a rozvoj studia nanomateriálů na TUL

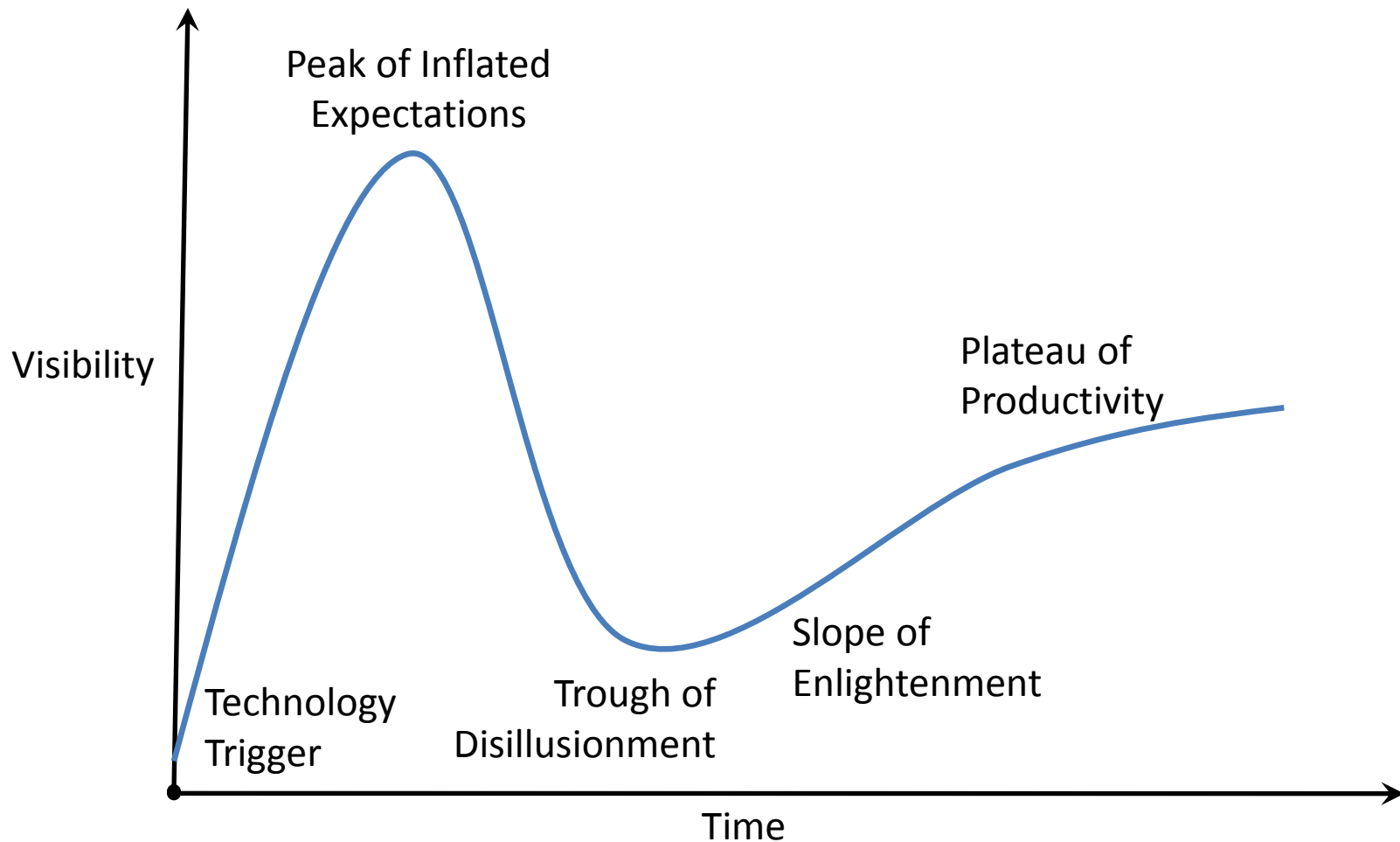
nano.tul.cz

Tyto materiály byly vytvořeny v rámci projektu
ESF OP VK: **Inovace a rozvoj studia nanomateriálů
na Technické univerzitě v Liberci**

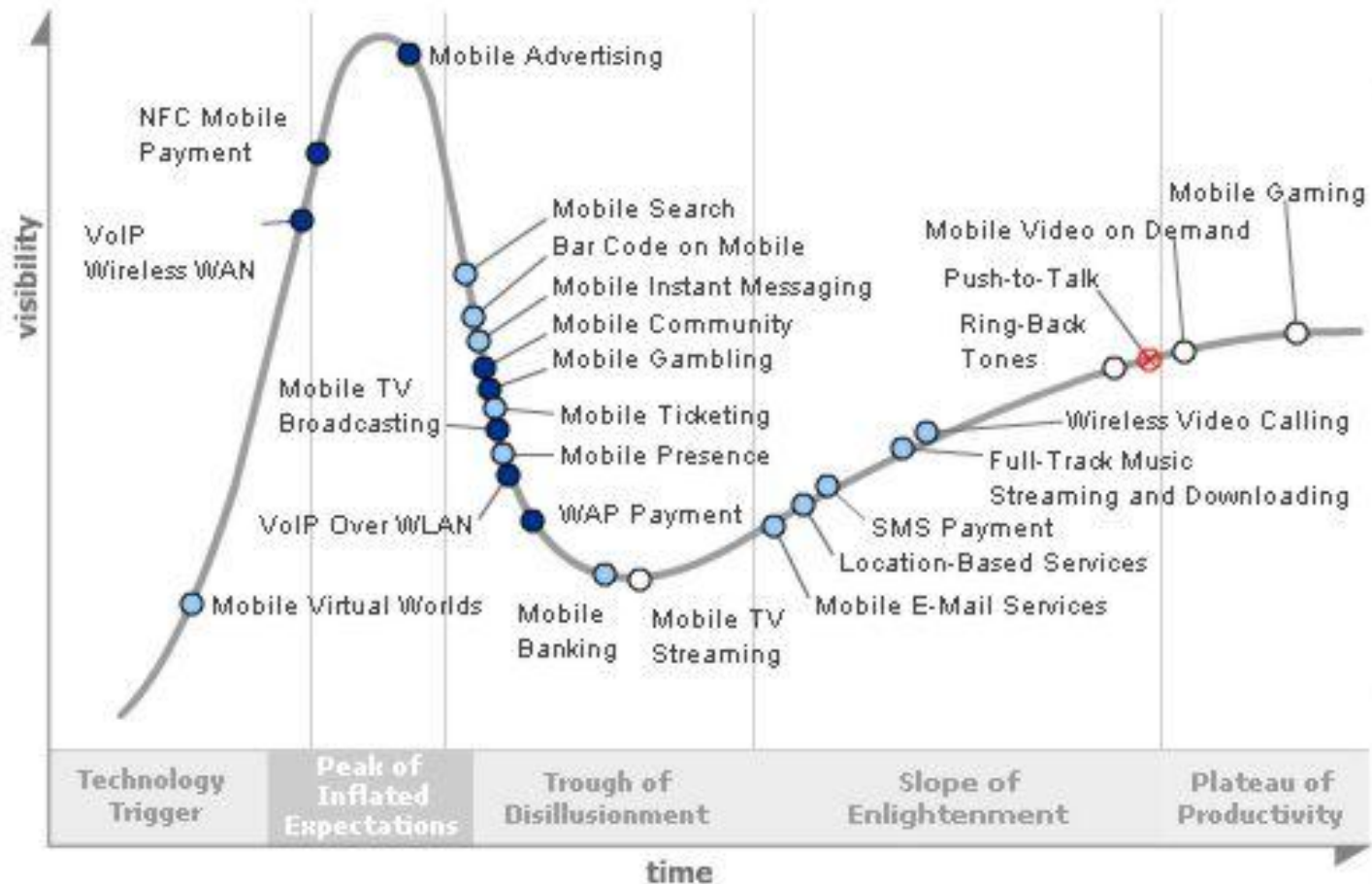


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Obstacles: Tech Adoption – Gartner Hype Cycle



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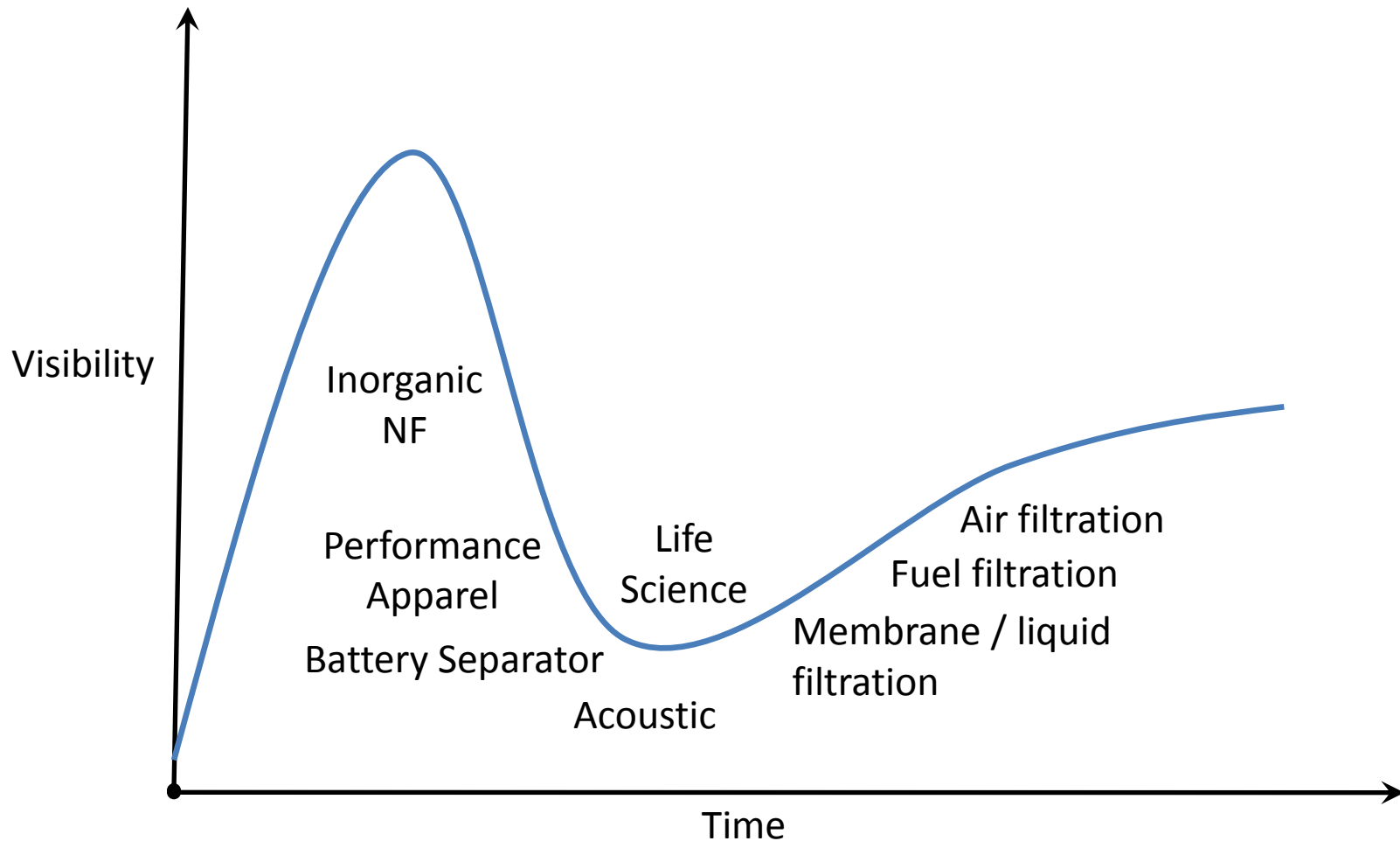
Years to mainstream adoption:

○ less than 2 years ● 2 to 5 years ● 5 to 10 years ▲ more than 10 years

⊗ obsolete before plateau

Source: Gartner Group

Tech Adoption – Nanofibers in Filtration & Separations



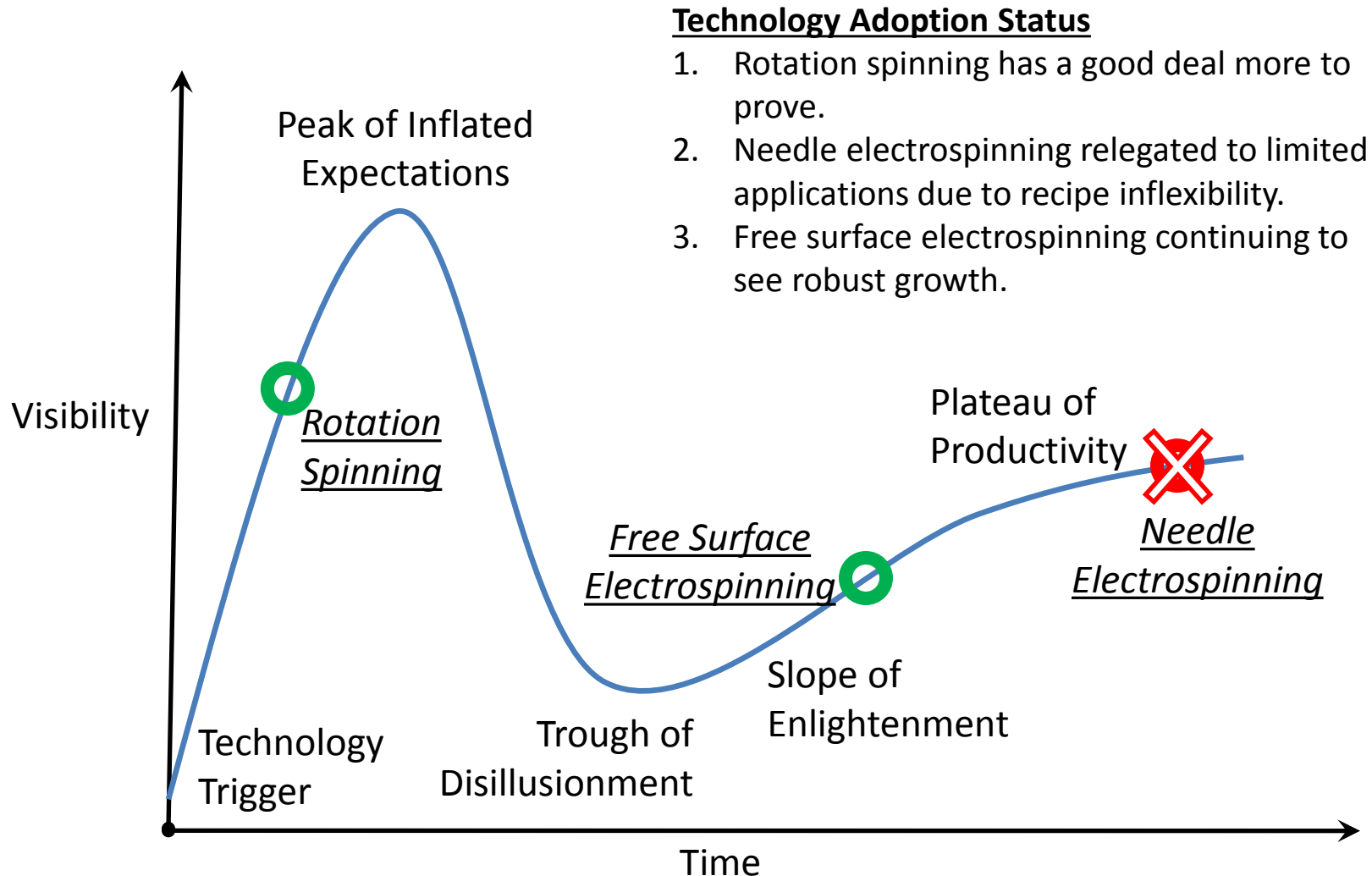
There are many ways to make a nanofiber. With over 100 global field installations, Elmarco machinery is considered best in class for incorporating the performance benefits of Nanofibers into end applications.

Nanofiber formation methods

Nanofiber Formation Methods

	Rotation Spinning	Needle Electrospin	Free Surface Electrospin
Practitioners	Diennes, Fiberio	Donaldson, Finetex, academia	Elmarco, Elmarco customers
Mechanism	High RPM heads and air flow	Conductive fluids pushed through needles	Conductive fluids onto electrode
Fiber diameters	100 – 600 nm	30 – 400 nm	30 – 200 nm
Fiber diameter increments	100 nm	20 nm	20 nm
Solvent spinning solids	20% - 40%	5% - 40%	5% - 25%
Solvent and Melt	Yes	Yes	Yes
Use of Current for Web Uniformity	No	Yes	Yes

Gartner: The Hype Cycle and Nanofiber Formation Methods



Pragmatic Buyers:

