



California Environmental Protection Agency
Department of Pesticide Regulation

Pesticides and Nanotechnology: Challenges and Opportunities

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Areas of Interest

- Clarifying the uses of nanotechnology as it relates to regulating pesticide products
- Data needs for assessing risks
- Technology advances for improving surveillance and mitigation



Challenges: Is It a Pesticide?

- When is a nanotech application a pesticide?
- Is the application different from “conventional” pesticide?
- Does application have unique properties that would affect its behavior in biological or environmental systems?



Challenges: Data Needs for Registering Pesticides

- DPR requires data before approving pesticide products
- DPR uses USEPA data requirements
- New kinds of data may be needed for some nanotechnology applications
- Consideration of both active ingredient and formulation components



Opportunities: Future Applications that Assist Regulators?

- Technology advances for chemical monitoring are of interest
 - DPR monitors pesticides in food, water, air, soil, etc.
- Materials applications
 - Protective equipment for workers
 - Tarping for field fumigation
 - Other capture systems
- Other??