



TECHNOLOGY DRIVEN. WARFIGHTER FOCUSED.

Adaptable Chemical Sensing to Meet Evolving Threats

Dr. Vincent Schnee

*RDECOM CERDEC Night Vision and Electronic Sensors
Directorate*



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Explosive Hazards

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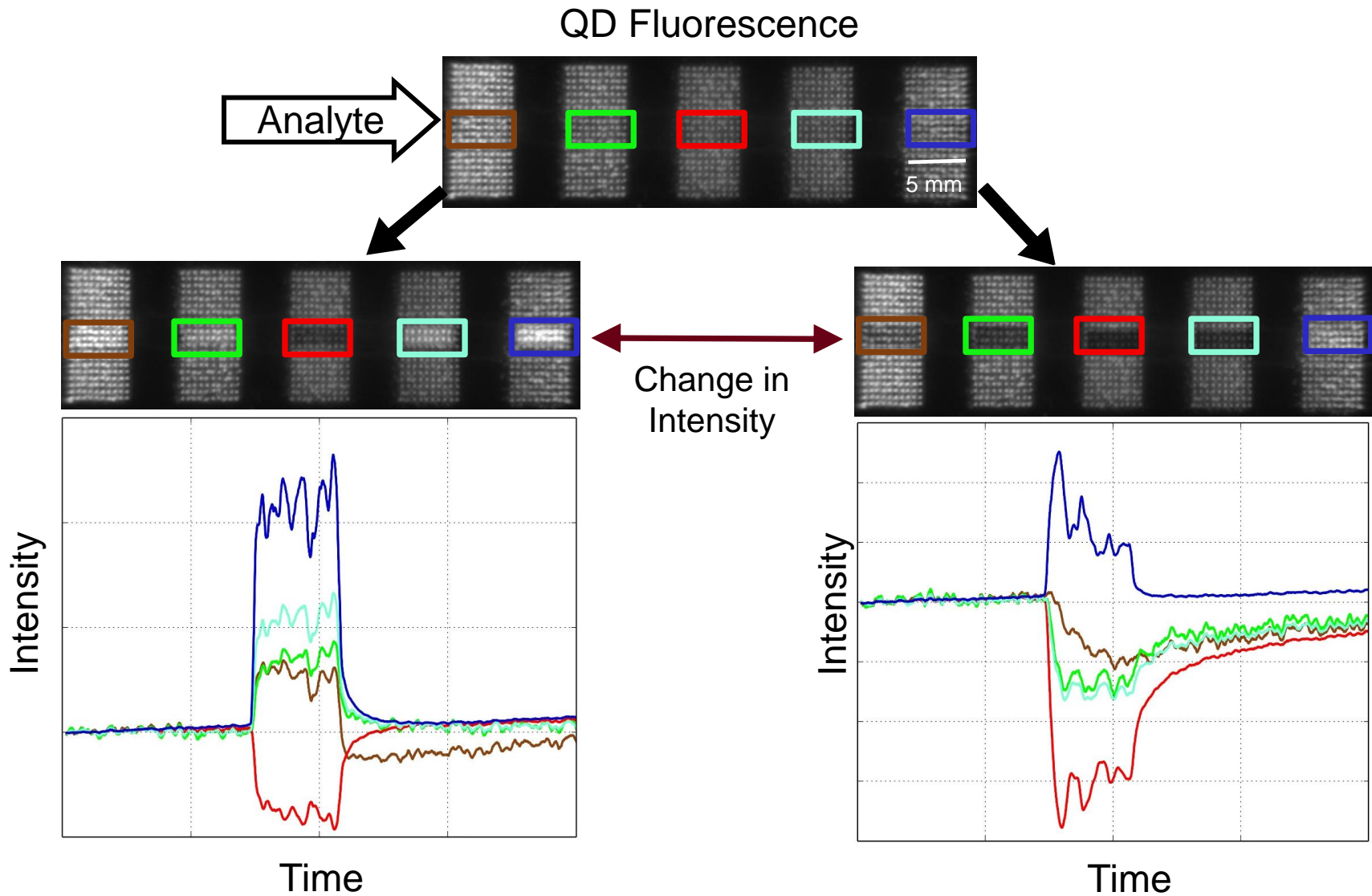
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Adaptable Sensor

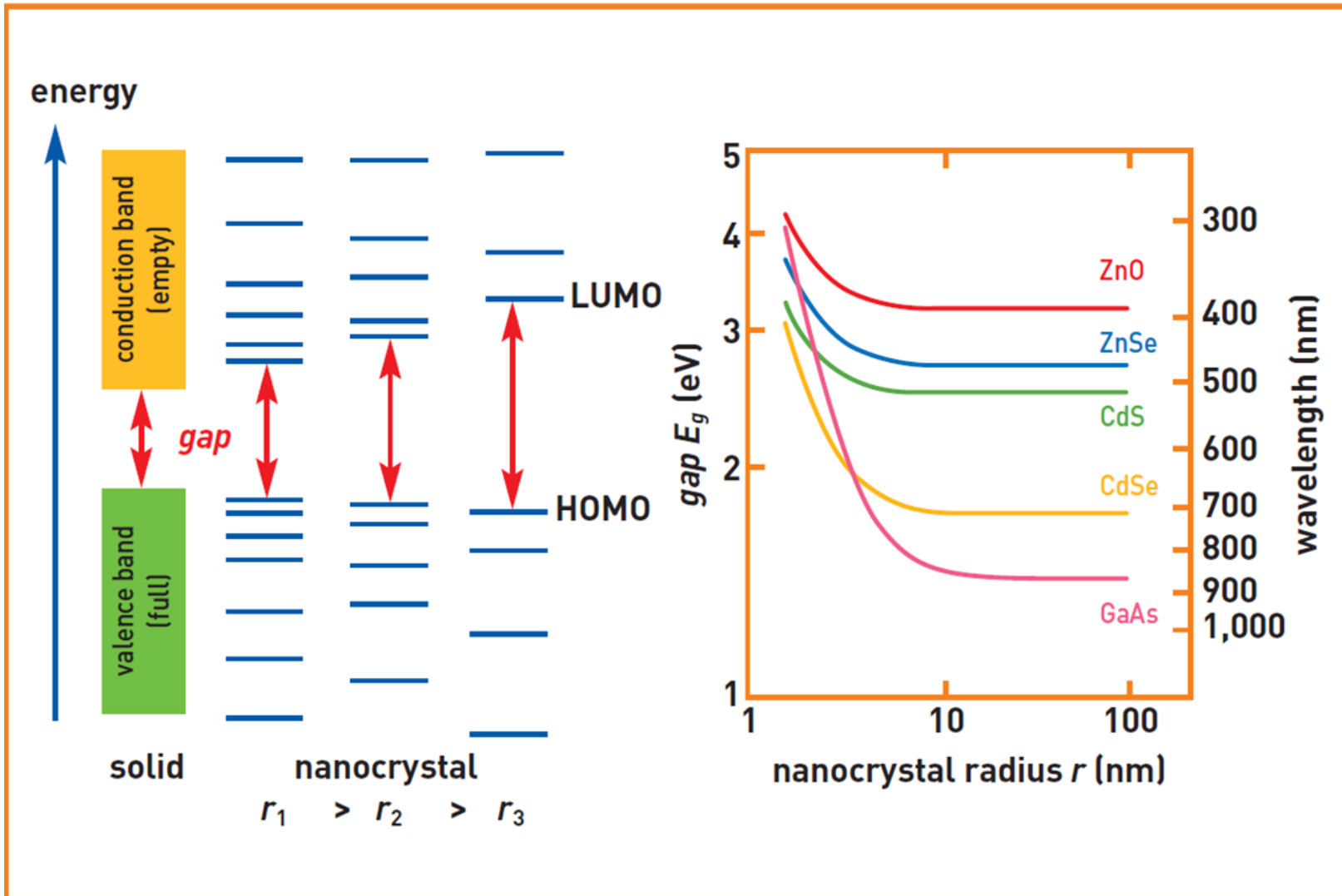
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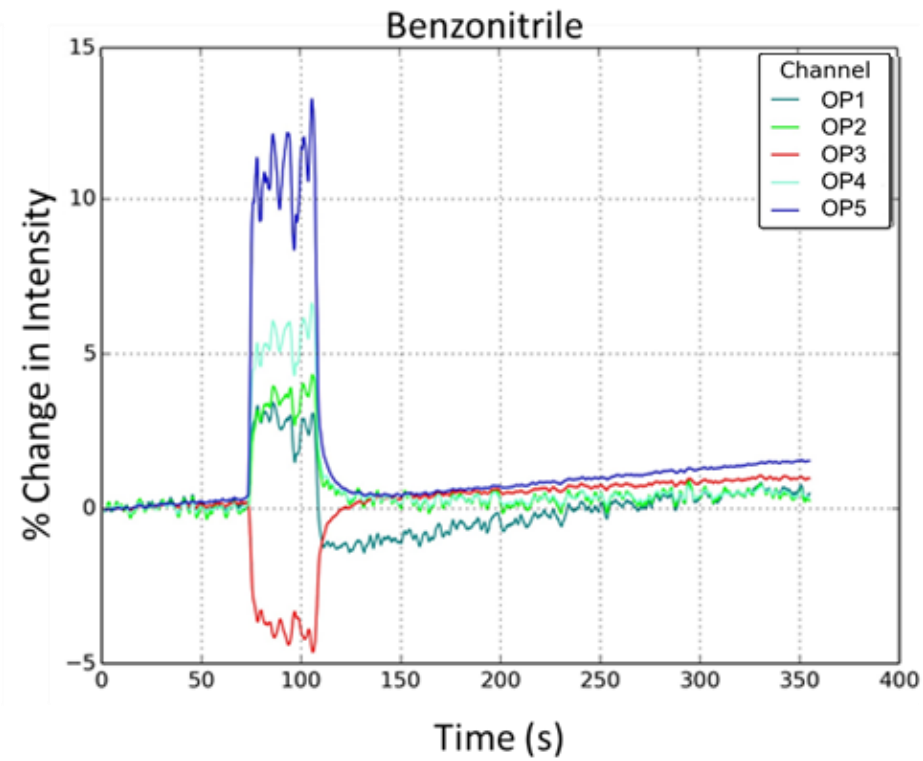
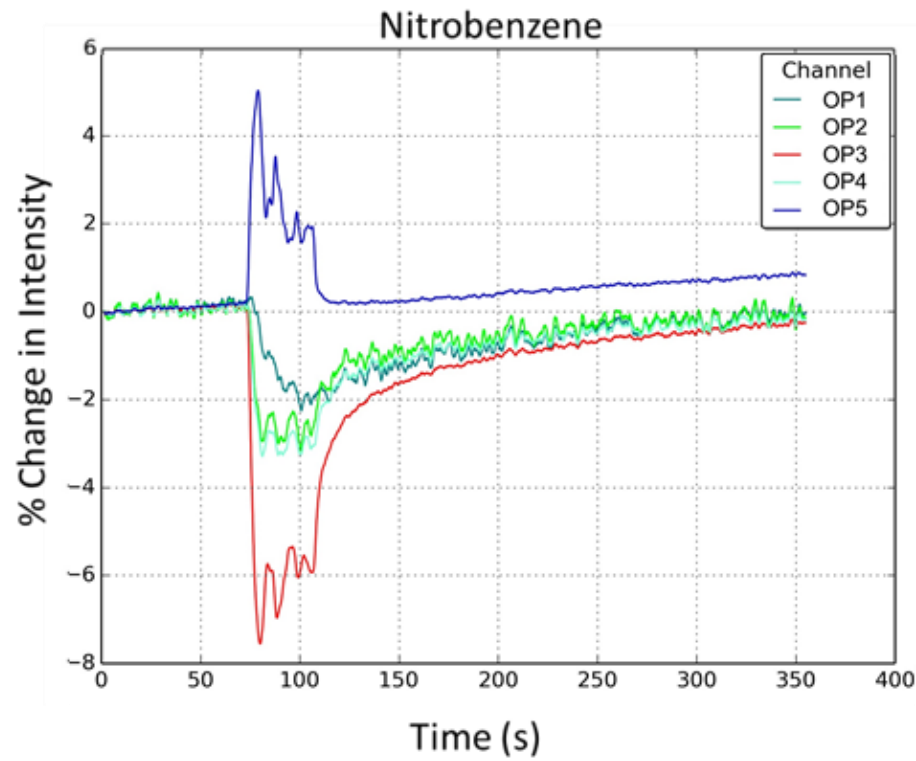
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What and Why QDs?



Response Patterns





Identification Ability

	12DNB	13DNB	14DNB	3NT	Blank	BZN	IB	BrB	CIB	EthyIB	NitroB	OX	PropylB	Phenol	Tol
12DNB	1														
13DNB		1													
14DNB			1												
3NT				1											
Blank					1										
BZN						1									
IB							1								
BrB								1							
CIB									1						
EthyIB									0.2	0.8					
NitroB					0.33						0.66				
OX									0.25			0.75			
Phenol													1		
PropylB														1	
Tol										0.33					0.66

Predicted Labels (93%)
Train/ Test Split: 60/40

	4NT	Acetone	AN	BZOH	Blank	CXN	PhAc	EthyBZ	Gas	IPA	Kene	Diesel	TNT	CHCl3	MeOH
4NT	1														
Acetone		1													
AN			0.66	0.33											
BZOH				0.75			0.25								
Blank					1										
CXN						1									
PhAc							1								
EthyBZ								0.8				0.2			
Gas									1						
IPA										1					
Kene											1				
Diesel												1			
TNT													1		
CHCl3														1	
MeOH															1

Predicted Labels (96%)
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Conclusions & Questions

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