



**Providing A nuclear fuel Cycle In the UK For
Implementing Carbon reduction (PACIFIC)**

EPSRC grant number EP/L018616/1

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Funded by EPSRC and Industry - £3.75M

Principle Investigators: Prof. Tim Abram (University of Manchester) - Fuels

Prof. Bruce Hanson (University of Leeds) - Separations





Providing A nuclear fuel Cycle In the uk For Implementing Carbon reduction (PACIFIC) – Fuels Theme

	Title of Project	Lead Investigator	Partners
In-Reactor Damage Effects in Advanced Ceramic Fuels and Coatings			
1	Fuel Modelling	R Grimes	Imperial College, Cambridge Manchester, Leeds Westinghouse
2	Thin Film and Fuel Pellet Sample Manufacture	T Scott	Bristol, Manchester, NNL
3	Advanced TRISO Coated Particle Fuel	P Xiao	Manchester, NNL
4	Materials Characterisation and Irradiation	T Abram	Manchester, Bristol, NNL
In-Reactor Damage Effects in Cladding Materials			
1	Mechanistic Study of Pellet-Cladding Interaction	M Preuss	Manchester, Imperial College, Westinghouse



Providing A nuclear fuel Cycle In the uk For Implementing Carbon reduction (PACIFIC) – Separations Theme

Research Area	Title of Project	Lead Investigator	University
Minor actinide separation	Direct monitoring of speciation in fuel cycle separations	S Faulkner	Oxford
	Optimising Interfacial Transfer Kinetics During Nuclear Separations	C Boxall	Lancaster
	Actinide behaviour and radiolysis effects of complexants in advanced separations	C Sharrad	Manchester
	Actinide Separation and Selective Extraction Technology (ASSET)	L Harwood	Reading



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Research Area	Title of Project	Lead Investigator	University
Advanced separations technology	Developing a better understanding of conventional solvent extraction technology	B Hanson	Leeds
	Intensified separation using impinging jets	P Angeli	UCL
	Development of high efficiency coalescers and settlers	B Hanson	Leeds
	Continuous Chromatographic Separation of Actinides and Fission Products	H Eccles	Uclan



Providing A nuclear fuel Cycle In the uk For Implementing Carbon reduction (PACIFIC) – Separations Theme

Research Area	Title of Project	Lead Investigator	University
Product conversion to fuel	The Conversion of Mixed Fuel Oxides to Fuels and Fuel precursors using Molten Salt systems	A Mount	Edinburgh
	Electro-reduction of spent nuclear fuel oxides for separation and conversion to fuel precursors	D Brett	UCL
	Decontamination and immobilisation of pyroprocessing wastes	N Hyatt	Sheffield