1. Buyer

1.1 Buyer

Official name:	Rijksuniversiteit Groningen
Legal type of the buyer:	Body governed by public law
Activity of the contracting authority:	Education

2. Procedure

2.1 Procedure

Title:	Benchtop NMR spectrometer
Description:	The University of Groningen intends to purchase a benchtop NMR spectrometer to analyse the composition of flow battery electrolytes during charge/discharge cycling. The benchtop system requires no cyrogens and has a minimal stray field, which makes it possible to integrate it with our existing battery cycling infrastructure (in a N2-filled glovebox). It must be possible to control the sample temperature in the range of 0 to 65 °C in order to evaluate the effect of battery operating temperature on electrolyte crossover and stability. The spectrometer must be able to acquire NMR spectra with high sensitivity for a wide range of nuclei present in either redox-active materials or other electrolyte components (e.g., 1H, 19F, 31P, 11B, 7Li, 23Na, 27Al, 51V). In the context of a NWO VICI project the research group Molecular Energy Materials will develop new flow battery electrolytes based on organic active materials. A major focus of this project is to understand the processes that lead to capacity fade at the molecular level. To study these processes, we will develop a methodology that integrates electrochemical characterization with NMR spectroscopic monitoring of electrolyte composition during charge/discharge of lab-scale batteries. We will build a system that monitors the electrolyte speciation by using a closed loop flow-setup that continuously feeds electrolyte solution to the benchtop NMR instrument. We have developed proof-of-concept for such studies using high-field NMR instruments that are available in the central FSE NMR facility of the University of Groningen. However, these instruments cannot be used for longer (multi-day) experiments. The VICI project will require a dedicated spectrometer that is integrated in our existing battery testing infrastructure to provide reliable high-quality data (e.g., with sampling directly from the glovebox to minimize interference from air exposure). An important factor for battery stability is the operating temperature; thus, temperature control of the electrolyte during cycling, both in the electrochemical cell and in the NMR magnet is crucial.
Procedure identifier:	b3a0e905-0773-469d-948f-ce329c8c893b
Type of procedure:	Other single stage procedure

2.1.1 Purpose

Main nature of the contract:	Supplies
Main classification (cpv):	38000000 Laboratory, optical and precision equipments (excl. glasses)

2.1.2 Place of performance

Country:	Netherlands

Anywhere in the given country

Additional information:	See documentation

2.1.3 Value

Estimated value

Rijksoverheid

excluding VAT:	120 000 Euro

2.1.4 General information

Legal basis:

Directive 2014/24/EU

5. Lot

5.1 Lot technical ID: LOT-0000

Title:	Benchtop NMR spectrometer
Description:	The University of Groningen intends to purchase a benchtop NMR spectrometer to analyse the composition of flow battery electrolytes during charge/discharge cycling. The benchtop system requires no cyrogens and has a minimal stray field, which makes it possible to integrate it with our existing battery cycling infrastructure (in a N2-filled glovebox). It must be possible to control the sample temperature in the range of 0 to 65 °C in order to evaluate the effect of battery operating temperature on electrolyte crossover and stability. The spectrometer must be able to acquire NMR spectra with high sensitivity for a wide range of nuclei present in either redox-active materials or other electrolyte components (e.g., 1H, 19F, 31P, 11B, 7Li, 23Na, 27Al, 51V). In the context of a NWO VICI project the research group Molecular Energy Materials will develop new flow battery electrolytes based on organic active materials. A major focus of this project is to understand the processes that lead to capacity fade at the molecular level. To study these processes, we will develop a methodology that integrates electrochemical characterization with NMR spectroscopic monitoring of electrolyte composition during charge/discharge of lab-scale batteries. We will build a system that monitors the electrolyte speciation by using a closed loop flow-setup that continuously feeds electrolyte solution to the benchtop NMR instrument. We have developed proof-of-concept for such studies using high-field NMR instruments that are available in the central FSE NMR facility of the University of Groningen. However, these instruments cannot be used for longer (multi-day) experiments. The VICI project will require a dedicated spectrometer that is integrated in our existing battery testing infrastructure to provide reliable high-quality data (e.g., with sampling directly from the glovebox to minimize interference from air exposure). An important factor for battery stability is the operating temperature; thus, temperature control of the electrolyte during cycling, both in the electrochemical cell and in the NMR magnet is crucial.

5.1.1 Purpose

Main nature of the contract:	Supplies
Main classification (cpv):	38000000 Laboratory, optical and precision equipments (excl. glasses)

5.1.2 Place of performance

Country:	Netherlands

Anywhere in the given country

Additional information:	See documentation

5.1.3 Estimated duration

Other duration:	Unknown

5.1.5 Value

Estimated value excluding VAT:	120 000 Euro

5.1.6 General information

Reserved participation:	Participation is not reserved.

Rijksoverheid

Procurement Project fully or partially financed with EU Funds.

The procurement is covered by the Government Procurement Agreement (GPA):	yes

5.1.9 Selection criteria

Criterion:	
Type:	Economic and financial standing
Use of this criterion:	Not used
Criterion:	
Type:	Suitability to pursue the professional activity
Use of this criterion:	Not used
Criterion:	
Type:	Suitability to pursue the professional activity
Use of this criterion:	Not used
Criterion:	
Type:	Suitability to pursue the professional activity
Use of this criterion:	Not used
Criterion:	
Type:	Suitability to pursue the professional activity
Use of this criterion:	Not used
Criterion:	
Type:	Suitability to pursue the professional activity
Use of this criterion:	Not used
Criterion:	
Type:	Suitability to pursue the professional activity
Use of this criterion:	Not used
Criterion:	
Type:	Suitability to pursue the professional activity
Use of this criterion:	Not used
Criterion:	
Type:	Technical and professional ability
Use of this criterion:	Not used

5.1.11 Procurement documents

Address of the	

Rijksoverheid

procurement documents:	https://s2c.mercell.com/today/149254

5.1.12 Terms of procurement

Terms of submission:

Electronic submission:	Allowed
Address for submission:	https://s2c.mercell.com/today/149254
Languages in which tenders or requests to participate may be submitted:	English
Deadline for receipt of expressions of interest:	11/05/2025 21:59 +00:00

Terms of contract:

The execution of the contract must be performed within the framework of sheltered employment programmes :	Not yet known

5.1.15 Techniques

Framework agreement:

No framework agreement

Information about the dynamic purchasing system:

No dynamic purchase system

5.1.16 Further information, mediation and review

Review organisation:	Rechtbank Groningen
Organisation providing additional information about the procurement procedure:	Rijksuniversiteit Groningen
Organisation providing more information on the review procedures:	Rechtbank Groningen

Rijksoverheid

8. Organisations

8.1 ORG-0001

Official name:	Rijksuniversiteit Groningen
Registration number:	01179037
Postal address:	Broerstraat 5
Town:	Groningen
Postcode:	9712CP
Country subdivision (NUTS):	Overig Groningen (NL113)
Country:	Netherlands
Contact point:	Esther Arends
Email:	e.r.arends@rug.nl
Telephone:	+31653239942
Internet address:	https://www.rug.nl

Roles of this organisation:

Buyer

Organisation providing additional information about the procurement procedure

8.1 ORG-0002

Official name:	Rechtbank Groningen
Registration number:	82950385
Department:	Rechtbank
Postal address:	Guyotplein 1
Town:	Groningen
Postcode:	9712NX
Country subdivision (NUTS):	Overig Groningen (NL113)
Country:	Netherlands
Contact point:	nvt
Email:	info.rechtbanknoordnederland@rechtspraak.nl
Telephone:	+310883614444
Fax:	+310883614444
Internet address:	https://www.rechtspraak.nl/Organisatie-en-contact/Organisatie/Rechtbanken/Rechtbank-Noord-Nederland
Information exchange endpoint (URL):	https://www.rechtspraak.nl/Organisatie-en-contact/Organisatie/Rechtbanken/Rechtbank-Noord-Nederland

Roles of this organisation:

Rijksoverheid

Review organisation

Organisation providing more information on the review procedures

Notice information

Notice identifier /version:	7a7a6dd0-616e-42f8-b21d-deeb4ceed13e - 01
Form type:	Competition
Notice type:	Prior information notice or a periodic indicative notice used as a call for competition – standard regime
Notice dispatch date :	29/04/2025 08:52 +00:00
Notice dispatch date (eSender):	29/04/2025 08:54 +00:00
Languages in which this notice is officially available:	English

Rijksoverheid