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НАСТАВНО-НАУЧНОМ ВЕЋУ

УНИВЕРЗИТЕТА У БЕОГРАДУ-ХЕМИЈСКОГ ФАКУЛТЕТА

На седници Наставно-научног већа Хемијског факултета Универзитета у Београду одржаној 12.2.2026. године, изабрани смо у Комисију за писање реферата за ангажовање проф. др Wesley R. Browne, редовног професора Универзитета у Гронингену, Холандија (University of Groningen), као гостујућег професора (Visiting Professor) на Универзитету у Београду-Хемијском факултету.

На основу документације, а у сагласности са Правилником о условима и начину ангажовања гостујућег професора на Универзитету у Београду („Гласник Универзитета у Београду“ бр. 135/07, 178/14 и 241/22), Статутом Универзитета у Београду (члан 145), и Статутом Хемијског факултета (члан 124) подносимо Наставно-научном већу Хемијског факултета Универзитета у Београду следећи:

РЕФЕРАТ

Основни подаци

Проф. др Wesley R. Browne, рођен 4. августа 1977. године, ирски је држављанин и редовни професор на Универзитету у Гронингену у Холандији. Тренутно обавља дужност редовног професора (Full Professor) и Шефа катедре за Molecular Inorganic Chemistry и активно учествује у наставном, научноистраживачком и организационом раду у области неорганске хемије.

Кандидат је основне студије хемије завршио на Dublin City University (Ирска) 1999. године, остваривши највиши академски успех (First Class Honors). Докторске академске студије из

области хемије завршио је 2002. године на истој институцији под менторством проф. J. G. Vos-a, уз екстерну евалуацију проф. Jean-Pierre Sauvage-a са Универзитета у Стразбуру.

Након одбране докторске дисертације, кандидат је реализовао постдокторска истраживања на Queen's University Belfast и Dublin City University, а потом и на University of Groningen у истраживачкој групи проф. Ben L. Feringe. Ови истраживачки боравци значајно су допринели његовом научном профилисању у области молекулске неорганске хемије и физичкохемијских метода.

Академску каријеру на University of Groningen започео је 2008. године као Assistant Professor (tenure track), где је радио до 2013. године, након чега је изабран у звање Associate Professor. Од 2015. године обавља функцију Шефа катедре за молекулску неорганску хемију, док је 2018. године изабран у звање редовног професора (Full Professor) на Универзитету у Гронингену.

Научно-истраживачки рад проф. Browne-a усмерен је на области:

- неорганске и бионеорганске хемије,
- каталитичких оксидационих процеса,
- спектроскопских метода (посебно Раманске спектроскопије)
- молекулске електрохемије,
- фото- и електроактивних молекулских материјала.

Истраживачка група кандидата међународно је препозната по интердисциплинарном приступу који интегрише синтетичку хемију, физичкохемијске методе и напредне спектроскопске технике.

Објављени научни радови и научна саопштења на међународним скуповима

Проф. др Wesley R. Browne остварио је изузетно обимну научну продукцију. Од 2001. године аутор је или коаутор више од 312 научних радова објављених у међународним часописима, од тога 33 прегледна рада и поглавља у научним књигама. Поред тога, коуредник је научне монографије и носилац једног патента.

Према подацима базе Scopus (стање март 2026. године), његови радови цитирани су више од 15.000 пута, док H-индекс износи 61, што указује на висок међународни научни утицај и континуирану релевантност његових истраживања.

Посебно се истиче чињеница да су резултати кандидата објављени у најпрестижнијим међународним научним часописима из области хемије и сродних дисциплина. Међу њима су радови у часописима Nature Communications (2 рада), Nature Nanotechnology (5 радова), Nature Chemistry (4 рада), Chemical Science (3 рада), Coordination Chemistry Reviews (7 радова), Chemical Society Reviews (7 радова), Angewandte Chemie International Edition (11 радова), Chemical Communications (14 радова), Inorganic Chemistry (30 радова) и Journal of the American Chemical Society (29 радова). Ова публикациона структура јасно указује на висок квалитет и међународну препознатљивост научних резултата кандидата, као и на његов континуирани допринос развоју савремене неорганске хемије.

Кандидат је уредник књиге, заједно са проф. Ben L. Feringa *Molecular Switches* (Wiley-VCH, 2011), као и аутор књиге *Electrochemistry* (Oxford University Press, 2018), која представља значајан допринос наставној и научној литератури у области електрохемије.

Професор Wesley R. Browne одржао је велики број пленарних предавања и предавања по позиву на међународним конференцијама и семинарима на позив научних институција, укључујући и два пленарна предавања у Београду (Саветовање СХД-а 2017.године и 7th EuChemS Inorganic Chemistry Conference 2025.године), као и популарно предавање на Коларцу у оквиру циклуса „Међународна година Периодног система“ који је организовао Хемијски факултет 2019. године

Потпунији списак научних радова професора Wesley R. Browne дат је у прилогу овог Реферата.

Међународна научна репутација

Током своје каријере проф. Browne био је руководиолац и учесник више престижних националних и међународних научноистраживачких пројеката, што потврђује његову високу научну репутацију и способност вођења сложених истраживачких програма. Међу

најзначајнијим пројектима издвајају се ERC Consolidator Grant, NWO VIDI grant и STW grant, као и учешће у оквиру програма Advanced Research Center – Chemical Building Blocks Consortium, који окупља академске и индустријске партнере у развоју савремених хемијских технологија.

Кандидат је имао значајну улогу у европским научним мрежама као носилац COST акција CM1003 „Biological Oxidations“ и CM1305 „ECOSTBio“, усмерених на развој биоинспириране оксидационе хемије и јачање сарадње између истраживачких група у Европи. Кроз ове активности допринео је координацији међународних истраживачких иницијатива, размени знања и мобилности младих истраживача.

Проф. Browne активно учествује у раду међународне научне заједнице и члан је Краљевског холандског хемијског друштва (KNCV). Његов научни углед потврђен је и ангажовањем у уређивачким одборима реномираних међународних часописа, где делује као члан Editorial Advisory Board-а часописа *Chemical Communications* (Royal Society of Chemistry, од 2012. године), *Particle* (Wiley, 2012–2019) и *European Journal of Inorganic Chemistry* (Wiley, 2010–2019).

Значајан допринос дао је и организацији великих међународних научних скупова. Био је организатор или члан организационих одбора више престижних конференција, укључујући EUROBIC – European Conference on Bioinorganic Chemistry (Groningen, 2026), International Symposium on Organic Photochemistry – ISOP (Groningen, 2026), PhotoIUPAC – IUPAC Conference on Photochemistry (Amsterdam, 2022), 11th International Conference on Circular Dichroism Spectroscopy (Groningen, 2007), као и ArmChemFront – International Conference on Chemistry (Yerevan, 2013). Ове активности сведоче о његовој значајној улози у обликовању међународне научне сарадње и развоју научних мрежа у области хемије.

Поред научних активности, кандидат је учествовао и у институционалним и стручним телима, укључујући Steering Group for Laser Safety на University of Groningen у периоду 2010–2015, као и International Steering Committee International Chemistry Olympiad (2007–2009), чиме је допринео развоју академских стандарда, безбедности у истраживању и промоцији хемије на међународном нивоу.

Све наведене активности јасно указују да проф. др Wesley R. Browne припада кругу истакнутих европских научника који активно обликују развој савремене неорганске хемије кроз научно лидерство, међународну сарадњу и организацију водећих научних иницијатива.

Резултати у развоју одговарајуће образовно-научне области

Проф. Browne поседује значајно искуство у универзитетској настави и менторском раду на свим нивоима студија. До сада је био ментор више од 25 успешно одбрањених докторских дисертација, као и више од 65 мастер и завршних радова основних академских студија. Тренутно руководи радом више доктораната, мастер студената и постдокторских истраживача.

Поред наставног рада, обављао је и значајне академске управљачке функције, укључујући позиције директора студијског програма хемије (основне и мастер студије), продекана за наставу (Education Director Stratingh Institute for Chemistry), руководиоца истраживачке јединице за неорганску хемију и председника управног одбора института.

За изузетан допринос настави добитник је више признања, укључујући награду „Gouden Docent“ Краљевског холандског хемијског друштва, као и више универзитетских награда за наставничку изврност.

Истраживачка група проф. др Wesley R. Browne-а представља интердисциплинарни научни тим чији је рад усмерен на два основна истраживачка правца: (i) механизме и методе у оксидативној катализи помоћу комплекса прелазних метала и (ii) развој функционалних молекулских материјала са фото- и електрохемијским одзивом. Иако тематски различити, ови истраживачки правци у пракси су снажно синергистички повезани, засновани на заједничкој експертизи у синтетичкој органској и неорганској хемији, електрохемији, као и електронској и вибрационој спектроскопији. Широки спектар физичкохемијских метода које група примењује омогућава развој иновативних експерименталних приступа и значајно доприноси напретку образовно-научне области неорганске хемије и хемије материјала.

У области оксидативне катализе, истраживања су усмерена на откривање и развој нових селективних оксидационих трансформација заснованих на једноставним, али ефикасним катализаторима прелазних метала и еколошки прихватљивим оксидансима, посебно водоник-пероксидом (H_2O_2). Ови приступи повезани су са интензивном применом спектроскопских метода, нарочито Раманске спектроскопије, као и електрохемије, ради разјашњавања механизма реакција и идентификације активних каталитичких врста.

Међу најзначајнијим научним резултатима издвајају се механистичка истраживања која су довела до идентификације фундаменталног извора реактивности код широког спектра комплекса мангана са каталитичким особинама, односно деградације лиганда уз формирање пиридин-карбоксилне киселине као кључног активног елемента система. Ова сазнања омогућила су даљи развој високо селективних каталитичких метода за различите оксидативне трансформације. Значајан допринос представља и откриће фотохемијских својстава серије комплекса гвожђа(II) релевантних за биомиметичку оксидативну хемију, што представља пример како интердисциплинарни приступ може довести до фундаментално нових научних открића.

Поред тога, важан истраживачки правац обухвата и оксидационе реакције катализоване паладијумом, развијене у сарадњи са индустријским партнером DSM. Посебно значајан резултат представља развој прве анти-Марковников селективне оксидације естарски заштићених алилних алкохола, која омогућава директну синтезу алдехида путем тандемске изомеризационо-оксидационе реакције линеарних алилних естара. У овим истраживањима кључну улогу имало је детаљно механистичко разумевање реакционих процеса.

Други истраживачки правац односи се на развој одзивних молекулских материјала, укључујући дизајн електрохемијски и фотохемијски прекидачких површина заснованих на самосклапајућим монослојевима и редокс-полимерима. Циљ ових истраживања је развој површина које реагују на спољашње стимулусе (светлост и редокс услове), као и успостављање фундаменталног разумевања понашања молекула имобилисаних на површинама. Стечена знања омогућавају развој предвидљивих приступа молекулској контроли површина и дизајну функционалних материјала са вишеструким ортогоналним функцијама.

Проф. др Wesley R. Browne поседује међународно признату стручност у примени спектроскопских метода, посебно Раманске спектроскопије и електрохемије, у (био)неорганској катализи и науци о материјалима заснованим на молекулским системима. Ова стручност је подстакла формирање јаким међународних истраживачких веза, што доказују заједничке публикације са великим бројем истраживачких група широм Европе и Америке.

Предлог Комисије

Проф. др Wesley R. Browne, редовни професор Универзитета у Гронингену, Холандија представља истакнутог међународно признатог научника чији научни резултати, висока цитираност и континуирани допринос развоју савремене неорганске хемије сведоче о изузетном научном угледу и стручности. Аутор је или коаутор више од 312 научних радова објављених у међународним часописима и носилац једног патента. Према подацима базе Scopus (стање март 2026. године), његови радови цитирани су више од 15.000 пута, док H-индекс износи 61. Посебно се истиче чињеница да су резултати кандидата објављени у најпрестижнијим међународним научним часописима из области хемије и сродних дисциплина. Међу њима су радови у часописима Nature Communications (2 рада), Nature Nanotechnology (5 радова), Nature Chemistry (4 рада), Chemical Science (3 рада), Coordination Chemistry Reviews (7 радова), Chemical Society Reviews (7 радова), Angewandte Chemie International Edition (11 радова), Chemical Communications (14 радова), Inorganic Chemistry (30 радова) и Journal of the American Chemical Society (29 радова).

Његов интердисциплинарни приступ, који обједињује синтетичку хемију, спектроскопију и електрохемију, довео је до значајних фундаменталних и примењених научних достигнућа са видљивим међународним утицајем.

Кандидат се издваја као научни лидер са снажним искуством у вођењу истраживачких тимова, развоју међународних сарадњи и образовању младих истраживача, што га сврстава у ред водећих европских стручњака у својој области. Посебно је значајно истаћи да проф. Browne активно сарађује са колегама са Универзитета у Београду – Хемијског факултета, где је током протеклих десет година одржао више предавања, учествовао као члан комисије

за одбрану докторске дисертације, као и да је иницирао и организовао заједнички PhD семинар, у оквиру којег је група од око 20 доктораната и три професора са Универзитета у Гронингену боравила у Београду ради одржавања заједничког научног семинара и јачања академске сарадње међу подмлатком.

На основу анализе научних резултата, наставног искуства, међународне видљивости и академског ангажовања, може се констатовати да проф. др Wesley R. Browne у потпуности испуњава све услове за избор у звање гостујућег професора. Његово ангажовање ће значајно допринети интернационализацији наставе и научноистраживачког рада, даљем развоју сарадње са водећим европским научним центрима, унапређењу студија кроз размену знања и искустава, као и развоју савремених истраживачких праваца у области неорганске хемије.

Имајући све написано у виду, Комисија са огромним задовољством предлаже ангажовање Проф. др Wesley R. Browne, редовног професора Универзитета у Гронингену, Холандија као гостујућег професора (Visiting Professor) на Универзитету у Београду-Хемијском факултету.

У Београду, 09.03.2026.

Комисија:

Др Маја Груден-Павловић, редовни професор
Универзитет у Београду-Хемијски факултет

Др Сања Гргурић-Шипка, редовни професор
Универзитет у Београду-Хемијски факултет

Др Матија Златар, научни саветник
Универзитет у Београду-ИХТМ

Прилог – Списак радова проф.др Wesley R. Browne

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