

**International Union of Pure and Applied
Chemistry**

Report on Audit of Financial Statements
for the year ended December 31, 2019

MPCompany LLP
Certified Public Accountants
615 OBERLIN ROAD, SUITE 200
RALEIGH, NC 27605

C O N T E N T S

	<u>Page(s)</u>
Independent Auditors' Report	1-2
Financial Statements:	
Statement of Financial Position	3
Statement of Activities and Changes in Net Assets	4
Statement of Functional Expenses	5
Statement of Cash Flows	6
Notes to Financial Statements	7-14



MPCompany LLP

Certified Public Accountants

615 Oberlin Road, Suite 200 | Raleigh, North Carolina 27605

Tel (919) 836-9200 | Fax (919) 836-9288 | www.mpcllp.com

J. Micah Pate, III
Angela W. Banask
Thomas M. Doherty
Brian T. Bennett
Alex Lehmann
Michael J. Palazzo, III

Independent Auditors' Report

The Executive Committee
International Union of Pure and Applied Chemistry

We have audited the accompanying financial statements of International Union of Pure and Applied Chemistry (a not for profit organization), which comprise the statement of financial position as of December 31, 2019, and the related statements of activities and changes in net assets, functional expenses, and cash flows for the year then ended, and the related notes to the financial statements.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of International Union of Pure and Applied Chemistry as of December 31, 2019, and the changes in its net assets and its cash flows for the year then ended in accordance with accounting principles generally accepted in the United States of America.

WPC Company LLP

March 16, 2019

International Union of Pure and Applied Chemistry
Statement of Financial Position
December 31, 2019

<u>Assets</u>	<u>2019</u>
Current assets:	
Cash and cash equivalents	\$ 315,225
Subscriptions and other receivables	5,080
Prepaid expenses	<u>10,681</u>
Total current assets	<u>330,986</u>
Property and equipment:	
Equipment	26,231
Furniture and fixtures	33,290
Website and database	<u>226,562</u>
	286,083
Less accumulated depreciation and amortization	<u>156,981</u>
Total property and equipment, net	<u>129,102</u>
Investments	<u>4,238,762</u>
Security deposit	<u>3,565</u>
Total assets	\$ <u><u>4,702,415</u></u>
 <u>Liabilities and Net Assets</u>	
Current liabilities:	
Line of credit	\$ 336,784
Accounts payable	58,901
Accrued expenses	47,818
Unearned subscriptions	65,896
Due to International Young Chemists Network	<u>5,051</u>
Total current liabilities	<u>514,450</u>
Deferred rent	<u>11,667</u>
Total liabilities	<u>526,117</u>
Net assets:	
Without donor restrictions	3,877,988
With donor restrictions	<u>298,310</u>
Total net assets	<u>4,176,298</u>
Total liabilities and net assets	\$ <u><u>4,702,415</u></u>

The accompanying notes are an integral
part of the financial statements.

International Union of Pure and Applied Chemistry
Statement of Activities and Changes in Net Assets
for the year ended December 31, 2019

	Without Donor <u>Restrictions</u>	With Donor <u>Restrictions</u>	<u>Total</u>
Revenues:			
Support:			
Grants and contributions	\$ 34,379	\$ 13,640	\$ 48,019
National subscriptions and service charges	857,329	-	857,329
Affiliate membership program	<u>16,507</u>	<u>-</u>	<u>16,507</u>
Total support	<u>908,215</u>	<u>13,640</u>	<u>921,855</u>
Other revenues:			
Online shop sales	3,310	-	3,310
Less cost of goods sold	<u>(3,060)</u>	<u>-</u>	<u>(3,060)</u>
Net sales	250	-	250
Publications	103,898	-	103,898
Net investment return	761,796	6,631	768,427
OPCW prize	33,240	-	33,240
Other income	<u>22,810</u>	<u>-</u>	<u>22,810</u>
Total other revenues	<u>921,994</u>	<u>6,631</u>	<u>928,625</u>
Total support and other revenues	1,830,209	20,271	1,850,480
Net assets released from restrictions	<u>35,079</u>	<u>(35,079)</u>	<u>-</u>
Total revenues	<u>1,865,288</u>	<u>(14,808)</u>	<u>1,850,480</u>
Expenses:			
Program and publications	1,028,068	-	1,028,068
Management and general	<u>517,335</u>	<u>-</u>	<u>517,335</u>
Total expenses	<u>1,545,403</u>	<u>-</u>	<u>1,545,403</u>
Changes in net assets	319,885	(14,808)	305,077
Net assets at beginning of year	<u>3,558,103</u>	<u>313,118</u>	<u>3,871,221</u>
Net assets at end of year	\$ <u>3,877,988</u>	\$ <u>298,310</u>	\$ <u>4,176,298</u>

The accompanying notes are an integral
part of the financial statements.

International Union of Pure and Applied Chemistry
Statement of Functional Expenses
for the year ended December 31, 2019

	2019		
	<u>Program and Publications</u>	<u>Management and General</u>	<u>Totals</u>
Travel and subsistence	\$ 551,230	\$ 15,836	\$ 567,066
Salaries	216,079	247,441	463,520
Contracted services	64,796	43,200	107,996
Payroll taxes and benefits	48,815	46,741	95,556
Building operations	23,036	34,554	57,590
Depreciation and amortization	14,875	38,135	53,010
Prizes and awards	46,566	-	46,566
Office supplies and expenses	-	37,794	37,794
Contributions	27,874	-	27,874
Postage	21,681	-	21,681
Professional fees	-	19,629	19,629
Printing and publications	10,987	-	10,987
Interest	-	9,590	9,590
Bad debt expense	-	7,005	7,005
Insurance	-	6,763	6,763
Utilities	2,129	3,193	5,322
Other	<u>-</u>	<u>7,454</u>	<u>7,454</u>
Total	\$ <u>1,028,068</u>	\$ <u>517,335</u>	\$ <u>1,545,403</u>

The accompanying notes are an integral
part of the financial statements.

International Union of Pure and Applied Chemistry
Statement of Cash Flows
for the year ended December 31, 2019

	<u>2019</u>
Operating activities:	
Changes in net assets	\$ 305,077
Adjustments to reconcile changes in net assets to net cash provided by (used in) operating activities:	
Depreciation and amortization	53,010
Realized and unrealized (gains) losses on investments	(717,768)
Changes in assets and liabilities:	
(Increase) decrease in assets:	
Subscriptions and other receivables	171,611
Prepaid expenses	17,078
Increase (decrease) in liabilities:	
Accounts payable	(35,630)
Accrued expenses	6,073
Unearned subscriptions	(93,082)
Deferred rent	(3,973)
Due to International Young Chemists Network	5,051
Net cash provided by (used in) operating activities	<u>(292,553)</u>
Investing activities:	
Proceeds from sales and maturities of investments	1,758,440
Purchases of investments	(1,549,608)
Capital expenditures	<u>(6,576)</u>
Net cash provided by (used in) investing activities	<u>202,256</u>
Financing activities:	
Net borrowings from (repayment of) line of credit	<u>25,690</u>
Net cash provided by (used in) financing activities	<u>25,690</u>
Net increase (decrease) in cash and cash equivalents	(64,607)
Cash and cash equivalents at beginning of year	<u>379,832</u>
Cash and cash equivalents at end of year	\$ <u>315,225</u>
Supplemental disclosure of cash flow information:	
Cash paid for interest	\$ <u>9,590</u>

The accompanying notes are an integral
part of the financial statements.

International Union of Pure and Applied Chemistry
Notes to Financial Statements
December 31, 2019

1. ORGANIZATION AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Organization

International Union of Pure and Applied Chemistry ("IUPAC"), founded in 1919, is a voluntary nongovernmental, nonprofit association of fifty-five national adhering organizations representing the chemists of their countries. Additionally, there is one Associate National Adhering Organization, thirty-one company associates, and twenty-nine associated organizations.

The objectives of IUPAC are to promote continuing cooperation among the chemists of the member countries, to study topics of international importance to pure and applied chemistry which need standardization or codification, to cooperate with other international organizations who deal with topics of a chemical nature, and to contribute to the advancement of pure and applied chemistry in all its aspects.

Basis of Accounting

The accompanying financial statements have been prepared on the accrual basis of accounting in accordance with accounting principles generally accepted in the United States of America and in accordance with the principles contained in the audit and accounting guide, *Not-for-Profit Entities*, published by the American Institute of Certified Public Accounts.

Cash and Cash Equivalents

Cash and cash equivalents include commercial checking and money market accounts. At certain times throughout the year, IUPAC may have on deposit with a financial institution amounts in excess of FDIC insurance limit of \$250,000. IUPAC has not experienced any losses in such accounts and believes it is not exposed to any significant credit risk on cash and cash equivalents.

Receivables

All receivables are stated at the amount management expects to collect from outstanding balances. Based on experience, management believes that they are fully collectible. Therefore, no allowance for doubtful accounts has been recorded. In the event that an outstanding balance could not be collected, it would be written down with a charge against bad debt expense and a credit to the receivables balance. Past due status is determined based on contractual terms.

Endowment Funds

The Executive Committee of IUPAC has interpreted relevant state law as requiring the preservation of the fair value of the original gift as of the gift date of the donor-restricted endowment funds absent explicit donor stipulations to the contrary. As a result of this interpretation, IUPAC classifies as net assets with donor restrictions (a) the original value of gifts donated to the endowment, (b) the original value of subsequent gifts to the endowment, and (c) accumulations to the endowment made in accordance with the direction of the applicable donor gift instrument at the time the accumulation is added to the fund. The remaining portion of the endowment fund is classified as net assets with donor restrictions until those amounts are appropriated for expenditure by IUPAC in a manner consistent with the relevant endowment fund. IUPAC considers the following factors in making a determination to appropriate or accumulate donor-restricted endowment funds:

International Union of Pure and Applied Chemistry
Notes to Financial Statements
December 31, 2019

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

Endowment Funds (continued)

- (1) The duration and preservation of the fund
- (2) The purposes of IUPAC and the donor-restricted endowment fund
- (3) General economic conditions
- (4) The possible effect of inflation and deflation
- (5) The expected total return from income and the appreciation of investments
- (6) Other resources of the organization
- (7) The investment policies of IUPAC

Funds with Deficiencies

From time to time, the fair value of assets associated with individual donor-restricted endowment funds may fall below the level that the donor requires the organization to retain as a fund of perpetual duration. In accordance with accounting principles generally accepted in the United States of America ("GAAP"), deficiencies of this nature are reported in net assets with donor restrictions. There were no such deficiencies as of December 31, 2019.

Return Objectives and Risk Parameters

IUPAC has adopted investment and spending policies for endowment assets that attempt to provide a predictable stream of funding to programs supported by its endowment while seeking to maintain the purchasing power of the endowment assets. Endowment assets include those assets of donor-restricted funds that IUPAC must hold in perpetuity or for a donor-specified period(s), as well as any board-designated funds. Under this policy, as approved by the Executive Committee, the endowment assets are invested in a manner that is intended to produce results that exceed the price and yield results of a benchmark portfolio and its respective market index, while assuming a moderate level of investment risk. IUPAC expects its endowment funds, over time, to provide an average rate of return of approximately 6.0% annually. Actual returns in any given year may vary from this amount.

Strategies Employed for Achieving Objectives

To satisfy its long-term rate-of-return objectives, IUPAC relies on a total return strategy in which investment returns are achieved through both capital appreciation (realized and unrealized) and current yield (interest and dividends). IUPAC targets a diversified asset allocation for its entire investment portfolio that places an emphasis on mutual funds, bonds and cash equivalents to achieve its long-term return objectives within prudent risk constraints.

Spending Policy and How the Investment Objectives Relate to Spending Policy

IUPAC has a policy of appropriating for distribution each year an amount not to exceed the annual yield of each of its endowment funds, with such allocation approximating a 2.46% return for 2019. In establishing this policy, management of IUPAC considered the long-term expected return on its endowment. This is consistent with IUPAC's objective to maintain the purchasing power of the endowment assets held in perpetuity or for a specified term as well as to provide additional real growth through new gifts and investment return.

International Union of Pure and Applied Chemistry
Notes to Financial Statements
December 31, 2019

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

Property and Equipment

IUPAC capitalizes all capital expenditures in excess of \$500 and with a useful life of more than one year and are recorded at cost. Depreciation and amortization are provided over the estimated useful lives of the respective assets using the straight-line method.

The estimated useful lives range as follows:

<u>Description</u>	<u>Useful Life</u>
Equipment	5 years
Furniture and fixtures	7 years
Website and database	5 years

Expenditures for repairs and maintenance are charged to expense as incurred. Upon disposition of property and equipment, the related asset and accumulated depreciation and amortization accounts are removed and any gain or loss is reflected in the statement of activities and changes in net assets for the period. Depreciation and amortization expense was \$53,010 for the year ended December 31, 2019.

Investments

Investments in marketable securities are stated at fair market value. Investment income (including gains and losses on investments, interest, and dividends) is included in the statements of activities and changes in net assets as a change in net assets without donor restrictions, except for earnings on net assets with donor restrictions. Investments are not included in current assets in the statements of financial position as they are not anticipated to be liquidated in the coming year.

Net Assets

Net assets, revenues, and other support are classified based on the existence or absence of donor or grantor imposed restrictions. Accordingly, net assets and changes therein are classified and reported as follows:

Net Assets Without Donor Restrictions – Net assets available for use in general operations and not subject to donor (or certain grantor) restrictions.

Net Assets With Donor Restrictions – Net assets subject to donor (or certain grantor) imposed restrictions. Some donor-imposed restrictions are temporary in nature, such as those that will be met by the passage of time or other events specified by the donor. Donor-imposed restrictions are released when a restriction expires, that is, when the stipulated time has elapsed, when the stipulated purpose for which the resource was restricted has been fulfilled, or both.

International Union of Pure and Applied Chemistry
Notes to Financial Statements
December 31, 2019

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

Revenue and Revenue Recognition

Subscriptions and publication income, which are nonrefundable, are comprised of an exchange element based on the benefits received. IUPAC recognizes the exchange portion of subscription dues over the subscription period. Revenue received for future subscriptions is deferred until the applicable year and reported as unearned subscriptions. With the exception of goods and services provided in connection with subscription dues, which are transferred over the period of membership, all goods and services are transferred at a point in time.

IUPAC recognizes contributions when cash, securities or other assets, an unconditional promise to give, or notification of a beneficial interest is received. Conditional promises to give, that is, those with a measurable performance or other barrier, and a right of return, are not recognized until the conditions on which they depend have been substantially met.

Income Taxes

IUPAC is exempt from federal income taxes under Section 501(c)(3) of the Internal Revenue Code and from North Carolina income taxes, accordingly, no income taxes have been provided in the accompanying financial statements.

Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. Accordingly, actual results could differ from those estimates.

Expense Allocation

The costs of program and supporting services activities have been summarized on a functional basis in the Statements of Activities. Accordingly, certain costs have been allocated among the programs and supporting services benefited. The expenses are allocated on the basis of estimates of time and effort.

Adoption of New Accounting Pronouncement

During 2019 IUPAC adopted the Financial Accounting Standards Board's Accounting Standards Update (ASU) No. 2014-09 - *Revenue from Contracts with Customers (Topic 606)*, as amended as management believes the standard improves the usefulness and understandability of IUPAC's financial reporting. Analysis of various provisions of this standard resulted in no significant changes in the way IUPAC recognizes revenue, and therefore no changes to the previously issued audited financial statements were required. The presentation and disclosures of revenue have been enhanced in accordance with the standard.

Subsequent Events

IUPAC has evaluated events and transactions that occurred between December 31, 2019 and March 16, 2020 which is the date the financial statements were available to be issued, for possible recognition or disclosure in the financial statements.

International Union of Pure and Applied Chemistry
Notes to Financial Statements
December 31, 2019

2. LIQUIDITY AND AVAILABILITY

Financial assets available for general expenditure, that is, without donor or other restrictions limiting their use, within one year of the balance sheet date, comprise of the following as of December 31:

	<u>2019</u>
Cash and cash equivalents	\$ 315,225
Investments	4,238,762
Subscriptions and other receivables	<u>5,080</u>
Total financial assets	4,559,067
Less amounts not available for general expenditures within one year:	
Investments with liquidity greater than one year	(780,276)
Line of credit	(336,784)
Due to International Young Chemists Network	(5,051)
Restricted funds	<u>(298,310)</u>
Total financial assets available to meet general expenditures within one year	\$ <u>3,138,646</u>

IUPAC regularly monitors the availability of resources required to meet its operating needs and other contractual commitments, while also striving to maximize the investment of its available funds. For purposes of analyzing resources available to meet general expenditures over a 12-month period, IUPAC considers all expenditures related to its ongoing activities, as well as the conduct of services undertaken to support those activities to be general expenditures.

3. FAIR VALUE MEASUREMENTS

The Organization follows FASB ASC 820, *Fair Value Measurements and Disclosures*, which establishes a single definition of fair value and a framework for measuring fair value in generally accepted accounting principles (GAAP). At December 31, 2019, the Organization had exchange traded funds, mutual funds, and, land held for investment that were carried at fair value for which the disclosure requirements of FASB ASC 820 applies.

FASB ASC 820 establishes three levels of inputs that may be used to measure fair value: Level 1: Quoted prices in active markets for identical assets or liabilities at the measurement date; Level 2: Inputs other than Level 1 that are observable, either directly or indirectly, such as quoted prices in active market for similar assets or liabilities, quoted prices for identical or similar assets or liabilities in markets that are not active, or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities; or Level 3: Unobservable inputs that are supported by little or no market activity and that reflect the Organization's own assumptions about market participants and prices.

International Union of Pure and Applied Chemistry
Notes to Financial Statements
December 31, 2019

3. FAIR VALUE MEASUREMENTS (Continued)

Fair value of assets measured on a recurring basis at December 31, 2019 are as follows:

	<u>Fair Value</u>	<u>Fair Value Measurements Using</u>		
		<u>Level 1</u>	<u>Level 2</u>	<u>Level 3</u>
Equities	\$ 2,868,512	\$ 2,868,512	\$ -	\$ -
Mutual funds	552,892	552,892	-	-
Fixed income	<u>817,358</u>	<u>-</u>	<u>817,358</u>	<u>-</u>
Total	\$ <u>4,238,762</u>	\$ <u>3,421,404</u>	\$ <u>817,358</u>	\$ <u>-</u>

4. INVESTMENTS

All investments are held by BB&T Securities as of December 31, 2019. Net investment return consists of the following as of December 31:

	<u>2019</u>
Dividends and interest	\$ 111,736
Realized gains (losses)	43,420
Unrealized gains (losses)	674,348
Investment management fees	(46,048)
Foreign exchange rate gains (losses)	<u>(15,029)</u>
	\$ <u>768,427</u>

5. LINE OF CREDIT

On September 26, 2017, IUPAC executed a line of credit agreement whereby IUPAC may borrow up to \$350,000. Borrowings under this agreement bear interest at a variable rate equal to the bank's prime rate minus 0.50% per annum.

This line of credit was extended in 2019 allowing for borrowings up to \$500,000. Borrowings under the extended agreement bear interest at a variable rate equal to the U.S. Prime Rate as published in The Wall Street Journal minus 0.50% per annum (4.25% as of December 31, 2019). Principal and interest are due in full at maturity on November 20, 2021. The line is secured by the investment securities of IUPAC. A total of \$336,784 was outstanding as of December 31, 2019.

6. OPERATING LEASES

IUPAC entered into a lease for office space beginning in February 2015 for a term of seventy-six months with a five-year renewal option. Building rent expenses totaled \$49,713 for 2019. IUPAC leases office equipment under operating lease agreements that expire at various dates through 2020. Equipment lease expense totaled \$5,910 for 2019.

International Union of Pure and Applied Chemistry
Notes to Financial Statements
December 31, 2019

6. OPERATING LEASES (Continued)

Future minimum lease payments under these non-cancelable lease agreements at December 31, 2019 are as follows:

2020	\$ 57,450
2021	<u>24,075</u>
Total	\$ <u>81,525</u>

In February 2020 IUPAC entered into an operating lease for office equipment that expires in 2025. The total commitment under this lease is \$20,970.

7. NET ASSETS WITH DONOR RESTRICTIONS

Net assets with donor restrictions include endowment funds totaling \$204,357 and consisting of the Paulo Franzosini Endowment Fund totaling \$5,659, the CHEMRAWN VII Fund totaling \$48,698, and the Hanwha Total Petrochemical Endowment Fund totaling \$150,000, as of December 31, 2019. Income earned by the Paulo Franzosini Endowment Fund is restricted for awards to science students to attend particular IUPAC meetings. Income earned by the CHEMRAWN VII Fund is restricted for awards to support the work of the CHEMRAWN VII Future Actions Committee. Income earned by the Hanwha Total Petrochemical Endowment Fund is restricted for awards to students and researchers in the field of polymer science and support of educational projects of the IUPAC Macromolecular Division. Such income is recorded as income with donor restrictions when earned.

The following represent changes in donor restricted endowment funds:

	<u>2019</u>
Endowment net assets, January 1	\$ 269,558
Investment income	6,631
Appropriation of endowment assets for expenditure	<u>(2,497)</u>
Endowment net assets, December 31	\$ <u>273,692</u>

7. NET ASSETS WITH DONOR RESTRICTIONS (Continued)

Restricted net assets are available as follows at December 31:

	<u>2019</u>
Purpose restrictions:	
Endowment funds	\$ 204,357
Earnings on endowment funds	69,335
Travel expenses - ICSU	9,781
Global Women's Breakfast	5,000
IYCN	4,944
Other	<u>4,893</u>
	\$ <u>298,310</u>

International Union of Pure and Applied Chemistry
Notes to Financial Statements
December 31, 2019

8. CONCENTRATIONS

Financial instruments that potentially expose IUPAC to concentrations of credit and market risk consist primarily of cash equivalents, investments, and subscriptions receivable. Cash equivalents are held by Branch Banking & Trust Company, and investments are held by BB&T Securities. Subscriptions receivable are amounts due from national adhering organizations. Management provides for probable uncollectible amounts through a provision for bad debt expense and an adjustment to a valuation allowance based on its assessment of the current status of individual accounts.

As of December 31, 2019, approximately 39% of IUPAC's subscriptions and other receivables were due from two entities. As of December 31, 2019, approximately 13% of IUPAC's payables was due to one vendor. Approximately 24% of noninvestment revenues were earned from two entities for the year ended December 31, 2019.

9. RETIREMENT PLAN

IUPAC has established a defined contribution retirement plan. The plan covers all employees and offers 100% vesting after one year of service. IUPAC made no contributions to the plan in 2019.

10. SUBSEQUENT EVENTS

Subsequent to year end, the IUPAC's investments experienced significant decreases in market value due to market fluctuations resulting from the impact of the coronavirus pandemic. The long-term impact of this matter is not presently determinable and, as a result, no adjustment has been made to these financial statements.